

Instructions for Generating Version 2 of Your Revised Paper Using LaTeX

Unpack the file PCI_LaTeX.tar.gz in the normal manner using either:

```
gunzip
tar -xvf PCI_LaTeX.tar
or WinZip, etc.
```

This will produce the directory “PCI_LaTeX.”

This directory contains a simple LaTeX template (PCI_LaTeX.tex) with appropriate definitions, environments and commands placed in the preamble to convert the article document class into the format used by Elsevier for the Proceedings of the Combustion Institute. Note that this format is new as of the 30th Combustion Symposium.

Revised LaTeX manuscripts should be formatted using this template so that the Combustion Institute can make efficient and accurate assessments regarding figure legibility and paper length. Files included in the directory are as follows:

- PCI_LaTeX.aux
- PCI_LaTeX.dvi
- PCI_LaTeX.log
- PCI_LaTeX.pdf PDF version of formatted template
- PCI_LaTeX.ps Postscript version of formatted template
- PCI_LaTeX.tex Main template

- qv_rt_BW.eps Sample EPS file used for example figure in PCI_LaTeX.tex.
- smpfig.eps Sample EPS file used for double column example.

The file PCI_LaTeX.tex contains the appropriate commands, etc., in the preamble and example text to demonstrate the formatting procedure. The sample text provides additional descriptions and instructions. Print either PCI_LaTeX.pdf or PCI_LaTeX.ps to see a sample of the final form and additional descriptions and instructions.

This template was compiled using the standard LaTeX 2e installation of the texmf package. Make sure that the sample file PCI_LaTeX.tex compiles cleanly before using it to format the paper. After verifying follow the instructions embedded inside the file.

Using this format the maximum allowed paper length is **7-1/3 pages** or equivalent. This reserves 2/3 page for comments in the final proceedings. The equivalent page length should be determined by adding together the full and partial pages. Partial pages are measured in terms of column length in units of inches, mm or 10pt lines.

NOTE: A convenient method of measuring the number of lines on partial pages is to print the following page on a transparency sheet and overlay it on the printed pages of your paper. Some printer utilities will automatically shrink pages, and this may cause a mismatch in column dimensions. Make sure that your printer driver is **NOT** set to Shrink Oversized Pages when you print your paper and the following page. The column height will be 8.5 in (216 mm) if printed correctly.

To determine the page equivalent length:

- a. Count the number of full text pages.
- b. Determine the total column length used on all the partial pages. Sum the lengths of the partial columns on each page. This may be done in units of inches (8.5 inch total column height), mm (216 mm total column height), or lines (61 total 10pt lines). Multiply by 2 for double column tables and figures.
- c. Include the equivalent of two extra blank lines to separate each figure or table in this calculation.
- d. Convert the partial columns to equivalent pages. Divide the result in b. by: (17 column inches/page) or (432 column mm/page) or (122 column lines/page).
- e. Combine the number of total and partial pages. If the sum is greater than 7-1/3 pages, the paper **MUST** be shortened **BEFORE** it is submitted.

Convert this two-column formatted version to PDF. Name it with your paper ID number (for example: **PID12345-formatted.pdf**)

Instructions for submitting this PDF file to the Combustion Institute are in the RevisionPackage.pdf, which you should already have downloaded from the 30th Combustion Symposium web site.

NOTE: This procedure will eventually be implemented in the more traditional manner within a new document class designed specifically for the Proceedings of the Combustion Institute. Contact Joe Oefelein if there are any questions or problems:

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Sandia National Laboratories
Livermore, California 94551-9051

Column height will be 8.5 in (216 mm) if printed correctly.

61 Lines of 9 pt Times New Roman with 10 pt line spacing

1	62
2	63
3	64
4	65
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58	119
59	120
60	121
61	122

Article Title (17/20)

Article Title (continued)

Author Name(s) (13/15)

Author Affiliation(s) (8/10)

*Affiliations (continued) ... Type one complete affiliation per line.
Note formatting and spacing modifications used inside these environments.*

Abstract

Insert abstract text here. The text of the abstract is (9/10) justified and runs the full width of the two columns. Use the commands listed above to typeset the title, authors, abstract and keywords in the required format. The abstract should contain between 200 and 300 words. Keywords are formatted in the manner shown below.

Keywords: (8/10)

1. Introduction

The body of the text is (9/10) justified. The formatting definitions specified at the top of this template make minor modifications to the `article.cls` document class. The 10pt font option is specified initially. The commands `\small` and `\baselineskip 10pt` must be placed after `\begin{document}` to convert to a 9pt font size with 10pt spacing. This will eventually be done in the more traditional manner within a new document class designed specifically for the *Proceedings of the Combustion Symposium*.

Headings for Nomenclature, Acknowledgements, and References are not numbered. Do not use the `\section*` command. Instead use the definitions included with this sample template. Use the `\section`, `\subsection` and `\subsubsection` commands as usual. Include the `\addvspace{10pt}` command after each of the section heading commands.

This template was compiled using the standard L^AT_EX 2_ε installation of the `texmf` package. Make sure that this sample `tex` file compiles before using it to format the paper.

1.1. Subheading

Sub-headings are automatically numbered, spaced, and set in italics as above.

1.1.1. Sub-subheading

Sub-subheading, if used, are also automatically numbered, spaced, and set in italics.

2. Page and Column Dimensions

The printed page area and column dimensions are set automatically by modifying the original dimensions in the `article.cls` package. These dimensions are listed in the preamble of the template. The

total allowed paper length is 7-1/3 pages. In most cases this page length will allow slightly more than the nominal 6000 words.

3. Tables and Figures

Place all tables and figures at the end of the paper. The captions have been redefined to provide an 8 pt font size and 9 pt spacing. Do not include separate lists of table and figure captions.

Figures should be sized and aligned such that the outer edge of the printed material extends to the column boundaries. Single column figures should be sized so that the printed material has a width of 2.67 inches (67 mm). Double column figures may be sized to a width of 5.5 inches (140 mm). An example table and figures are also provided below.

Acknowledgments

Use the defined acknowledgement environment here, not `\section*`. Bibtex can be implemented in the normal way. The `unsrnat.bst` style should be used. After generating the `.bib` file, import it directly into the document. Note that the font and line spacing are reduced to `\footnotesize` and `\baselineskip 9pt` for the references. The font and line spacing are then toggled back to `\small` and `\baselineskip 10pt` for the tables and figures. Three example references [1–3] are provided in the bibliography section.

References

- [1] W. Mayer and H. Tamura. *Journal of Propulsion and Power*, 12(6):1137–1147, 1996.
- [2] C. K. Westbrook and F. L. Dryer. *Progress in Energy and Combustion Science*, 10(1):1–57, 1984.
- [3] R. A. Yetter, F. L. Dryer, and H. Rabitz. *Combustion Science and Technology*, 79:97–128, 1991.

Table 1: Critical pressure and temperature of H_2 and O_2 .

	H_2	O_2
P_c	1.30 MPa (12.8 atm)	5.04 MPa (49.7 atm)
T_c	33.2 K	155 K

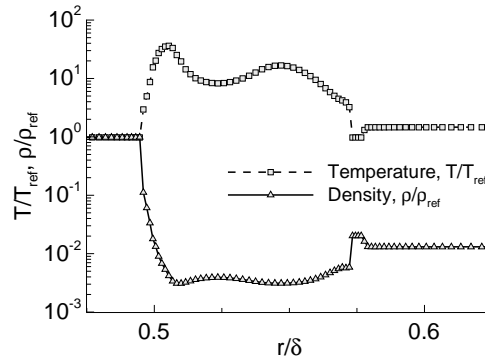


Fig. 1: Radial variation of temperature and density at an axial location of 0.03 units.