AFRL ANSI-BASED FORMAT GUIDELINES

The United States Air Force uses ANSI NISO Z39.18 as a guide for all technical reports. **AFRL uses the subset of this ANSI standard as outlined below.**

A4.1. Type (Font) and Heads (Chapter Titles). The preferred type (font) is 12-point Times New Roman or Arial. The following is an example (format and spacing) of heads:

1.0 FIRST-ORDER HEAD IS ALL CAPS, CENTERED AND BOLDED

1.1 Second-Order Head is Bolded, Same Font Size as Text, Caps and Lower Case, Flush with Left Margin

A4.1.1. Insert one blank line between head and text.

1.1.1 Third-Order Head is Indented into the Paragraph, Boldface, Caps and Lower Case Letters, Followed by a Period. Then continue the copy.

-or-

1.1.1 Third Order Head May Be Flush with Left Margin

A4.1.2. Then continue copy in new paragraph, as done with second-order heads.

A.4.2. Spacing. Drafts can be submitted with line spacing at either one-and-a-half or double spaced. Camera-ready copy should be single spaced. It isn't necessary to double-space between paragraphs if the first line of each paragraph is indented.

A4.3. Margins. Leave **one-inch left, right, and top margins**. *Page number should be centered and located one-half inch* (1/2") from bottom of page. This is accomplished in page setup, Margins - bottom - 1", Layout – Footer .07". Leave enough room to include applicable data rights legends (legends in 6 pt font) and the page number (note that page number boxes will need to be pulled down in order to clear the legend). If these are too low, our printers will not print.

A4.4. Numbering. Page numbers are centered at bottom of page, Figure numbers are centered below Figure, with caption centered on the line below Figure number (or on the same line as Figure number). Table numbers are centered above Table on the same line as Table caption, and Equations are numbered on right margin across from Equation.

NOTE: ***Number Figures, Tables, and Equations sequentially, not by section.***

A4.5. Style for Equations, Figure Captions, and Table Captions.

A4.5.1. Style for Equations.

$$E = MC^2 \qquad (1)$$

$$\phi_{det} = Le \times \Omega_{det} \times vn(D,\hat{\imath}) \bullet \pi D^2 dD \qquad (2)$$

A4.5.2. **Style for Figure Captions**. Callouts (labels) should be in Upper and Lower case type, <u>not</u> all caps.

Figure 1

Sample Representation Only
(border not required)

A4.5.2.1. **The Figure Caption is Bolded, Centered, Caps and Lower Case Letters, No Periods**

-or-

Figure 1: Figure Caption May be on Same Line as Figure Number

A4.5.2.2.There should be two blank lines between figures or tables and text.

<u>**NOTE**</u>: .Reference to Figures and Tables must appear in text ***<u>before</u>*** actual Figure or Table appears in report. Where possible, integrate Figures and Tables into text and place Figure/Table as soon after the first mention of it as possible, before beginning a new subject.

A4.5.3. **Style for Table Captions.**

Table 1. Title Line and Number All in One Line, Centered or Flush Left, Bolded, (No Periods

Sample Representation Only
(border not required)

A4.5.3.1. All line drawings should be crisp and easy to read. Figure letters and numbers (callouts) should be typed and in at least an 8-point type *(handwriting on figures is not acceptable)*.

A4.5.3.2. Provide screened prints, negatives (Goldenrods) or photographs (color or black & white) with the camera-ready copy.

A4.6. Front of Document. There should be the following four sections (with page numbers listed in lower-case Roman numerals, beginning with Roman numeral **iii**): **Table of Contents, List of Figures, List of Tables, Glossary**.

A4.6.1. **Table of Contents.** Start pagination of Table Of Contents with lower-case Roman numeral **iii.** Start listing contents from Introduction (no need to include List of Figures, List of Tables, or Glossary). Appendices can be numbered as shown or sequentially from the last page of the report. If there's only one Appendix, just call it an Appendix. Example (border not required).

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	DISCUSSION OF RESULTS	3
	2.1 High Symmetry Hypervalent Structures (OF_6)	4
	2.2 Azide-like Structures	5
	2.2.1 $N(N_3)_3$, $HN(N_3)_2$, $N(N_3)_2^-$ and $N(N_3)_4^+$	5
	2.2.2 NON_3 and NO_2N_3	7
3.0	CONCLUSIONS AND RECOMMENDATIONS	35
	REFERENCES37	
	APPENDIX A - Publications and Presentations	A-1
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A4.6.2. **List of Figures.** Continue pagination with lower-case Roman numerals. List all Figures found in text (not Figs. in Appendix, if any). Example (border not required).

LIST OF FIGURES

Figure		Page
1	Overall View of Propulsion Vehicle	3
2	Motor Configuration	6
3	Apparatus Used to Make Nozzle Tubes	7

A4.6.3. **List of Tables.** Continue pagination with lower-case Roman numerals. List all Tables found in text (not Tables in Appendix, if any. These may be listed separately in front of the Appendix). Example (border not required).

LIST OF TABLES

Table		Page
1	Some of the Upper-Stage Propulsion Options	19
2	Results of Test Firing #1	25
3	Results of Test Firing #2	26

A4.6.4. **Acronyms/Glossary.** Create an acronym list (Glossary) that lists and defines all acronyms and symbols that appear in your report. List all terms alphabetically, beginning with those starting with capital letters, followed by lower case (e.g., H_2, HEDM, hcp). Follow alphabetical entries with Greek or special symbols. Capitalize definitions only if they are proper names (e.g. Department of Defense). In text, define acronym the first time it appears, with acronym following in parentheses; i.e. Small Business Innovation Research (SBIR). Example (border not required).

GLOSSARY

CAT	computerized axial tomography
COMSAT	Communication Satellites
DMP-128	a Polaroid™ photopolymer
DoD	Department of Defense
dcg	dichromated gelatin
H_2	hydrogen
HEDM	High Energy Density Matter
$\forall$	angle of attack

A4.6.4.1. Next, start body of text with Introduction, and begin pagination with Page 1 (English numerals). This may be accomplished by inserting a Section Break and start the pagination with 1.

A4.7. Abbreviations. The words "Figure," "Reference," and "Equation" should be written out in text, but abbreviated when used within parentheses. Months are abbreviated to three letters without punctuation (e.g., Jun, Jul, Aug). Units of measurement are abbreviated (e.g., 12 cm, 50 l, 20 lb, 1 atm, 30 sec, 200 psig) without punctuation – except for "in." (inches), which may be followed by a period to distinguish it from the preposition – and are generally singular.

A4.8. References. References should be listed numerically, in the order they appear in the text. The reference page should be at the end of the report (not at the end of each section).

A4.8.1. For works that are generally referred to throughout the report, without citing specific references from the work, create a Bibliography (in alphabetical order). Personal communications, unpublished speeches, or any other information not available for reference

by the reader should not be included in the References – footnote your citation instead. References must be available to readers of the report.

A4.8.2. **In References.** Include author(s) (last name first, followed by first name or initials), title, volume, date, page numbers. Follow this style.

A4.8.3. **Papers/Journal Articles/Conference Presentations.**

Author's last name, then first name
Titles of papers are in quotation marks
Journal names or Conference names are in *italics*
Volume is **bolded**
Date follows comma (not within parenthesis)
page numbers (pp.) are last.

Examples:
Author(s) Lastname, First, "Title of Article," *Journal Name (italics)*., **19,** 628, Jun 1993 pp. _-_.
Author(s) Lastname, First, "Title of Article," Paper No. (if AIAA or CPIA paper, etc.), *Name of Conference,* Location, Date

A4.8.4. **Technical Reports.**

Author's last name, then first
Titles of reports are in *italics*
Next is report number
Name and address of performing agency/organization
Date is last

Example:

Author(s), *Title*, AFRL-PR-ED-TR-200X-XXXX, Company, Inc., City, ST, Jan 2006

A4.8.5. **BOOKS.**

Author's last name, then first
Title of book can be **Bolded** or Underlined
Publisher's name and address
Date of publication
Page numbers last

Example:
Author(s), **Book Title,** Harper & Rowe, New York, NY, 1993, pp. 36-38, 77, 98-101

A4.9. Instructions for Standard Form 298. Contractor shall complete Blocks 2-5a, 6, 7, 11, 13, 14, 15 and 16a-c, (if applicable) of the SF 298 and submit with the final report. Block 9 shall contain Air Force Research Laboratory (AFRL) and the Technical Directorate Name, Symbol and TD Address.

A4.10. Instructions for CD ROM Submittal. Contractor is encouraged to make maximum use of multimedia options (data files, programs and video) to document the program progress. Editable text shall be in English in the AF Standard Desktop format (MS Office). The final camera ready copy shall be converted to PDF format by the STINFO Office when all requirements have been met.

CD-ROMs shall have the following items legibly printed on top of the disk:

1. Contract Number and Program Name.
2. CDRL numbers referenced and Title of Data Items.
3. Date.
4. Company Logo/ Nomenclature.
5. Distribution Statement.