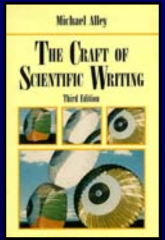
Formatting a Document in Scientific Writing

These slides, which are used in graduate and undergraduate engineering courses at Virginia Tech, come from Chapter 16 in *The Craft of Scientific Writing* (3rd ed., Springer-Verlag).



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Proceedings of
ASME TURBOEXPO 2000
May 8-11, 2000, Munich, Germany

2000-GT-0201

HIGH FREESTREAM TURBULENCE EFFECTS ON ENDWALL HEAT TRANSFER
FOR A GAS TURBINE STATOR VANE

R.W. Radomsky[*] and K. A. Thole
Mechanical Engineering Department
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24060

ABSTRACT

INTRODUCTION

Endwall Heat Transfer Measurements

UNCERTAINTY ESTIMATES

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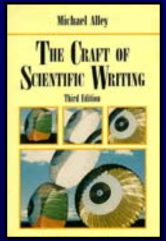
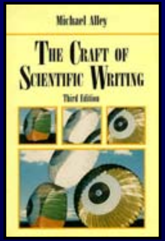


Not all rules of format are constant

Reports Sandia Laboratories	Textbooks Prentice-Hall	Journals ASME
Figure 1	Fig. 1	fig. 1
Table 1	Table 1	table 1
equation 1	equation (1)	Eq. 1



Format is the arrangement of type on the page

typography

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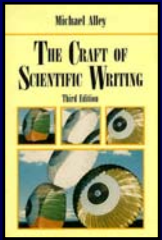
layout



Each typestyle has its own personality and power

Serif

Times New Roman
abcdefghijklmnopqr
stuvwxyz1234567890

Garamond
abcdefghijklmnopqr
stuvwxyz1234567890

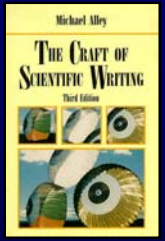
Courier
abcdefghijklmnopqr
stuvwxyz1234567890

Sans Serif

Arial
abcdefghijklmnopqr
stuwxyz1234567890

Arial Narrow
abcdefghijklmnopqr
stuwxyz1234567890

Comic Sans
abcdefghijklmnopqr
stuwxyz1234567890



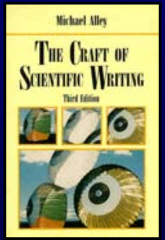
Avoid large blocks of capital letters

~~WORDS SET IN ALL CAPS USE MORE SPACE THAN TEXT SET IN LOWERCASE.~~

Words set in all caps use more space than words set in lowercase.

~~TYPE IS TO READ~~

Type is to read



Morton-Thiokol's presentation to NASA suffered because of all capital letters on the slides

PRIMARY CONCERNS -

FIELD JOINT - HIGHEST CONCERN

- EROSION PENETRATION OF PRIMARY SEAL REQUIRES RELIABLE SECONDARY SEAL FOR PRESSURE INTEGRITY
  - IGNITION TRANSIENT - (0-600 MS)
    - (0-170 MS) HIGH PROBABILITY OF RELIABLE SECONDARY SEAL
    - (170-330 MS) REDUCED PROBABILITY OF RELIABLE SECONDARY SEAL
    - (330-600 MS) HIGH PROBABILITY OF NO SECONDARY SEAL CAPABILITY

- STEADY STATE - (600 MS - 2 MINUTES)
  - IF EROSION PENETRATES PRIMARY O-RING SEAL - HIGH PROBABILITY OF NO SECONDARY SEAL CAPABILITY
    - BENCH TESTING SHOWED O-RING NOT CAPABLE OF MAINTAINING CONTACT WITH METAL PARTS GAP OPERATING TO MEOP
    - BENCH TESTING SHOWED CAPABILITY TO MAINTAIN O-RING CONTACT DURING INITIAL PHASE (0 - 170 MS) OF TRANSIENT

Morton-Thiokol Presentation to NASA
January 27, 1986

Choose a type size that is easy to read

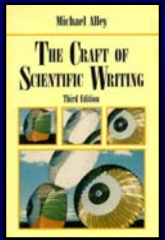
48 point → **posters**

36 point – 24 point → **presentation slides**

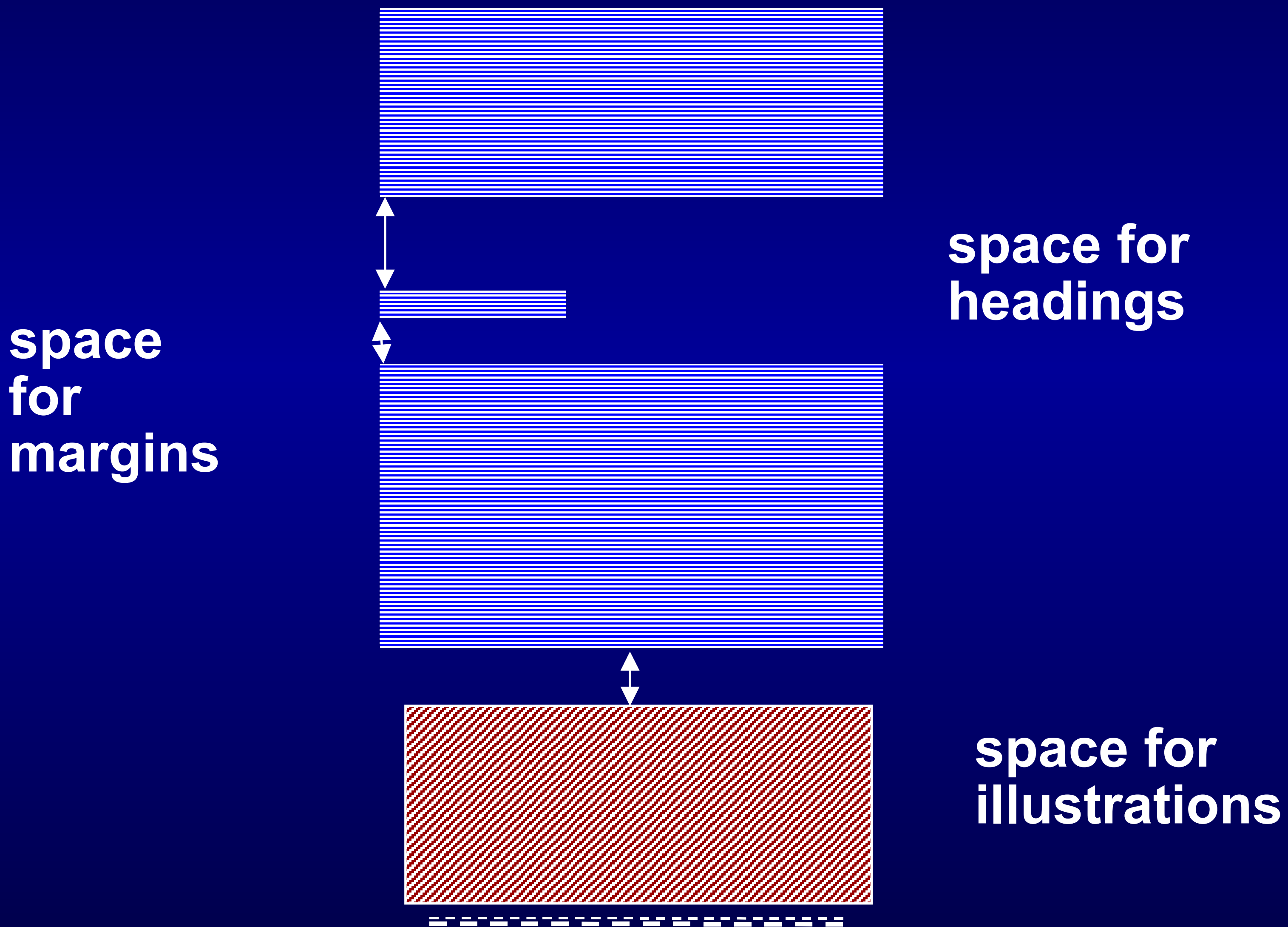
18 point – 14 point → **titles**

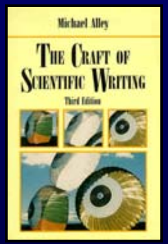
12 point – 10 point → **text**

8 point → **footnotes**

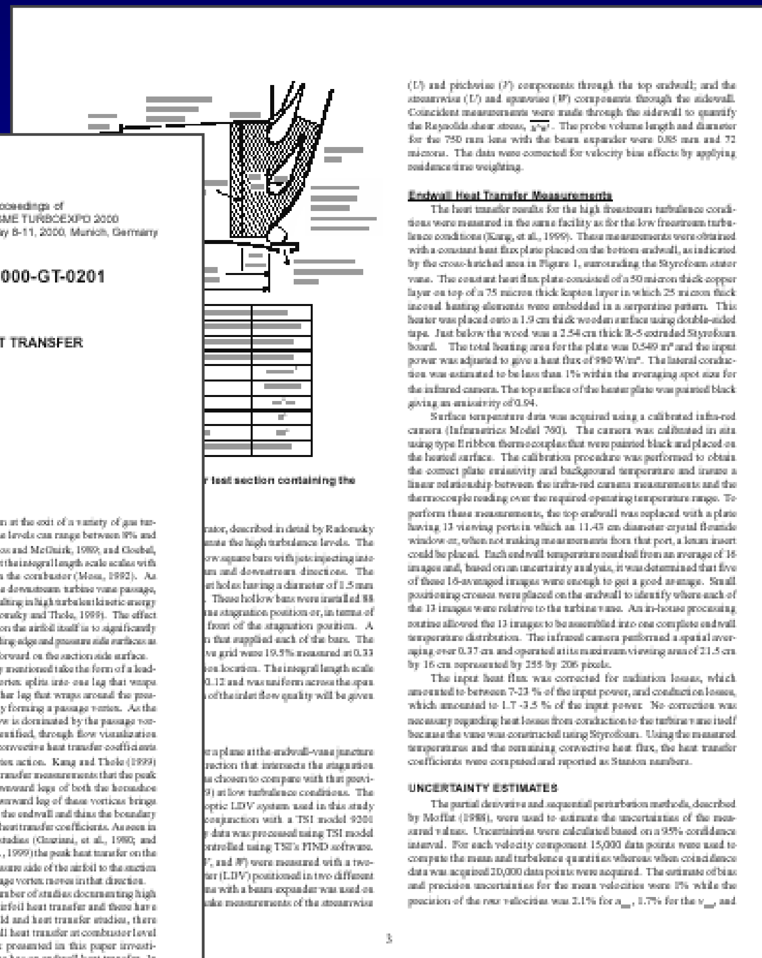


In your layouts, use white space for association, emphasis, and hierarchy





Follow the format that is expected or required for the situation


(U) and pitchwise (V) components through the top endwall; and the streamwise (U) and spanwise (W) components through the sidewall.

Endwall Heat Transfer Measurements

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