

GUIDELINES FOR ESTIMATING LENGTH FOR *PHYSICAL REVIEW D*

Rapid Communications in *Physical Review D* are limited to five journal pages (600 lines), and Brief Reports and Comments to four pages (480 lines), although exceptions will be considered for Comments. To estimate the length of a paper, use the following guidelines. (Since the estimates have some inherent uncertainty, it is advisable to submit manuscripts with estimated length somewhat shorter than the maximum limits, to avoid the need to cut later with resulting delay in publication.) All calculations are made in terms of single-column Physical Review (PR) lines; whenever a rule gives a line equivalent for a number of characters (letters, numerals, *and spaces*), it is to be understood that a partial PR line actually counts as a full line.

- (1) The *title* takes four lines for the first 86 characters and two lines for each additional 86.
- (2) *Bylines* take two lines for each 105 characters of an author-name group and two lines for each 105 characters of the corresponding address(es); two lines separate institutional groups. For bylines, no more than 60 lines are counted, provided all names are grouped together with all institutions listed below.
- (3) The *receipt* date takes two lines.
- (4) The *abstract* takes two lines for each 94 characters; two lines separate it from the receipt date, and two more lines separate it from the text.
- (5) The listing of *PACS numbers* (and space below) is counted as 4 lines.
- (6) For the *text* of the manuscript, the average number of characters (letters and spaces) per manuscript line is estimated and converted to the number of PR one-column lines by the formula

$$\frac{\text{No. of characters/Avg. manuscript line}}{\text{No. of characters/Avg. PR line (=55)}} \times \text{No. of manuscript lines} = \text{No. of PR lines.}$$

- (7) A *short displayed* equation (less than 34 characters, excluding equation number; 40 if there is no equation number) with no built-up fractions (or matrices, 6-j symbols, etc.) takes 2.5 lines; built-up fractions take 3 lines, with parentheses 4 lines; matrices generally take 2–3 lines **per row**, depending on complexity. When the equation has *both superscripts and subscripts* another $\frac{1}{2}$ line is added. A long equation, typed across two columns, takes double these amounts. When there are a number of two-column equations, intervening short equations may also be given two-column space. Short lines or groups of several lines preceding, following, and between equations are counted directly and included in the equation count.
- (8) *Section headings* take one line for each 40 characters. Two lines precede a heading, and one line follows.
- (9) Each *reference* takes one line for every 58 characters. Also, four lines separate the text and the references.
- (10) A *figure* that can be scanner-reproduced at one-column width ($\leq 3\frac{3}{8}$ inches wide) takes 7 lines per inch of final height; if it requires greater width, it takes 14 lines per inch of final height. (See the Information for Contributors regarding figures.)
- (11) Each *figure caption* takes one line for each 58 characters. Also, there is one line between a figure and its caption, and two lines between text and figure or caption (double these amounts if the figure requires greater than one-column width).
- (12) Each line (including double rules) in a *table* becomes one line for a table small enough to be typed in one-column width (58 characters including 3 spaces between columns of the table itself), two lines if it is wider. Two (or four) lines separate text from a table or caption. A *table caption* is counted as one line for each 58 characters.

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