

Instructions for the Preparation of Manuscript for Journal of The Physical Society of Japan

Taro BUTSURI* and Hanako GAKKAI^{1,**}

Department of Physics, Tohoku University, Sendai 980

¹*Department of Physics, Osaka University, Toyonaka 560*

(Received August 18, 1997)

This guide explains how to prepare manuscripts for Journal of The Physical Society of Japan using the style file “jpsj.sty”.

KEYWORDS: \LaTeX , physics, equation, reference, figure, table, appendix

§1. Introduction

Authors are requested to prepare the manuscript using \LaTeX .¹⁾ The style file “jpsj.sty” should be used. This style file was originally designed for Japanese Journal of Applied Physics (JJAP) by ISY Group,²⁾ and was later modified by M. Kondo for Supplement of J. Phys. Soc. Jpn. (JPSJ). Then, it has been revised for the use of the book “Computational Physics as a New Frontier in Condensed Matter Research”, by Y. Okabe, T. Saso, N. Hatano, M. Kikuchi, N. Furukawa and T. Kawakatsu. This style file “jpsj.sty” is the revised version of the above style files.

§2. Style

The default style of “jpsj.sty” is designed for Regular Articles and Letters. Specify [short] for Shortnotes and Comments. When submitting a manuscript to the publication office, use the style [preprint]. You may use the [preprint] style for your private distribution.

§3. Equations

3.1 Equation and eqnarray

Examples of equations are given in the following:

$$H = -J \sum_{\langle i,j \rangle} \delta_{\sigma_i \sigma_j}, \quad (3.1)$$

and

$$\begin{aligned} m_x &= \frac{\sqrt{3}}{2}(S_b - S_c), \\ m_y &= \frac{3}{2}S_a - \frac{1}{2}. \end{aligned} \quad (3.2)$$

3.2 Italic bold

Mathematical italic bold fonts should be used for vectors:

$$H = \boldsymbol{\pi} \cdot \mathbf{A}. \quad (3.3)$$

A convenient macro `\mib` is provided.

3.3 Fractions

To display fractions, the authors can use `\dffrac` command instead of `\frac` command. Then, fonts of standard size will be used even for complex fractions such as

$$a_0 + \frac{b_1}{a_1 + \frac{b_2}{a_2 + \frac{b_3}{a_3 + \frac{b_4}{a_4}}}}.$$

3.4 Full-text and half-text

If the authors want to write a full-text equation, `full` environment can be used.

$$H = -t_1 \sum_{n,n.,\sigma} (c_{i,\sigma}^\dagger c_{j,\sigma} + h.c.) - t_2 \sum_{n,n.n.,\sigma} (c_{i,\sigma}^\dagger c_{j,\sigma} + h.c.) + U \sum_i n_{i\downarrow} n_{i\uparrow}. \quad (3.4)$$

The `\fulltext` and `\halftext` commands can be also used to switch to and from `full` environment.

However, the use of half-text equations is recom-

mended if possible. For the case of the above equation eq. (3.4), one can write using `eqnarray` environment as

$$\begin{aligned} H &= -t_1 \sum_{n,n.,\sigma} (c_{i,\sigma}^\dagger c_{j,\sigma} + h.c.) \\ &- t_2 \sum_{n,n.n.,\sigma} (c_{i,\sigma}^\dagger c_{j,\sigma} + h.c.) + U \sum_i n_{i\downarrow} n_{i\uparrow}. \end{aligned} \quad (3.5)$$

* Present address: Department of Physics, Tokyo Metropolitan University, Tokyo 192-03.

** Second footnote test.

3.5 Subequations and subeqnarray

The author can also use the `subequations` environments. Let us show a sample text.

$$\alpha + 2\beta + \gamma = 2 \quad (3.6a)$$

$$\gamma = \nu(2 - \eta) \quad (3.6b)$$

The usage of the `subequationarray` environments is as follows: Just use `subeqnarray` instead of `eqnarray` as

$$u_k^2 = \frac{1}{2}(1 + \xi_k) \quad (3.7a)$$

$$v_k^2 = \frac{1}{2}(1 - \xi_k). \quad (3.7b)$$

§4. References and Footnotes

References are cited using `\cite` command. All references should be listed continually within curly brackets using commas such as `\cite{rf:3,rf:4,rf:5}`; then the reference numbers are printed in an appropriate way. An example of citation is like this.³⁻⁵⁾

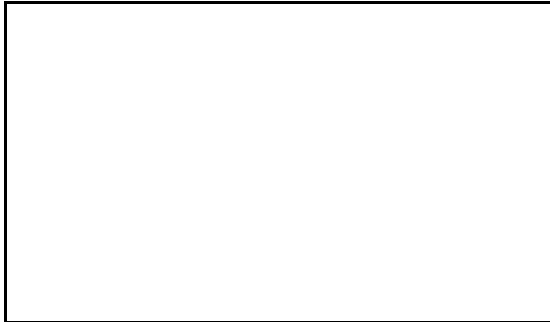


Fig. 1. The example of the figure captions in half-text environment.

Footnotes can be used only for additional information of authors, such as the present address, the e-mail address, and so on. When authors want to make a comment in the main text, use `\cite` instead of `\footnote`. The comment text should be provided in the `thebibliography` part at the end.

§5. Figures

The figures should be submitted in the form of good-quality clear prints. In the `\figure` environment, the authors are advised to use `\label` command for specifying the figure number. To allocate a space for a figure, the height of the figure should be given by `\figureheight` command. As an example, the caption of Fig. 1 is given in the following:

The `\fullfigure` environment can be used for wide figures. We give an example of the `\fullfigure` in Fig. 2.

§6. Tables

Authors are encouraged to use `\label` command for specifying the table number as in the case of figures. An example of table using `\table` environment is given in Table I.

In Table II, an example of table using `\fulltable` environment is also given.

Table I. Sample of half-text table.

temperature	energy	specific heat
0.1	0.24	2.46
0.2	0.80	4.62
0.3	1.11	3.27

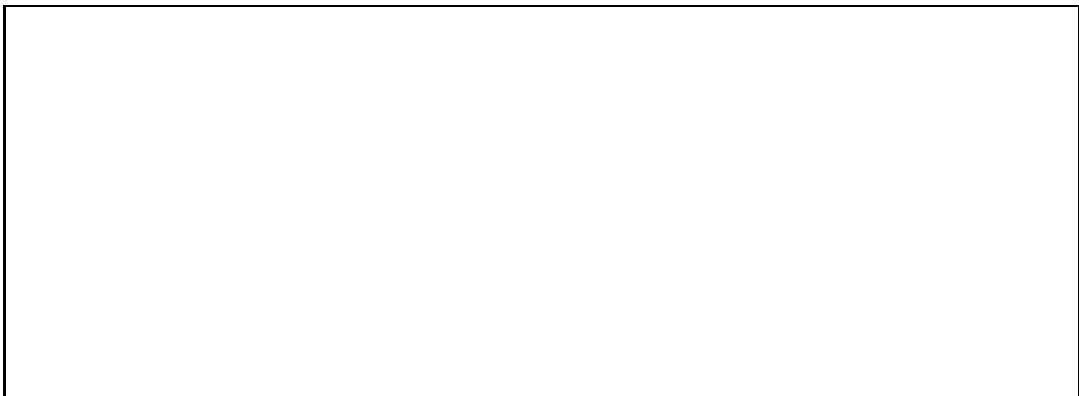


Fig. 2. The example of the figure caption in full-text environment.

Table II. Sample of full-text table.

sample	method 1	method 2	method 3	method 4	method 5
A	0.182	0.184	0.183	0.189	0.196
B	0.256	0.257	0.259	0.272	0.281
C	0.426	0.421	0.427	0.448	0.511

§7. Comment

If you have any trouble or find any bug, please send an e-mail message to the working group for on-line journal in the Physical Society of Japan.⁶⁾

Acknowledgements

We would like to thank a lot of colleagues who have made all kinds of contributions. You may use the `\acknowledgements` command which is defined in `jjap-tex.sty`. However, we suggest you to use the `\LaTeX` standard command `\section*{Acknowledgements}`.

Appendix A: Use of Appendix

If you use more than two appendices, the appendix numbers automatically become **A**, **B**, *etc.* Of course, the equations can be used as

$$S_q^z = \frac{1}{L} \sum_{j=1}^L S_j^z e^{iqj}. \quad (\text{A}\cdot 1)$$

Appendix B: Second Appendix

The section number of the second appendix will be **B**. Thus, the equation number will be like this:

$$S_q^z = \sum_l |\langle \text{GS} | S_q^z | l; q \rangle|^2 e^{-\tau[(E_1(k+q) - E_g)]}, \quad (\text{B}\cdot 1)$$

-
- 1) Leslie Lamport: `\LaTeX`, (Addison-Wesley, New York, 1986).
 - 2) The members of ISY group are T. Inoue, S. Suzuki and Y. Yamamoto.
 - 3) K. Hida: J. Phys. Soc. Jpn. **62** (1993) 439.
 - 4) T. Sakai and M. Takahashi: J. Phys. Soc. Jpn. **62** (1993) 750.
 - 5) S. Yamamoto and S. Miyashita: J. Phys. Soc. Jpn. **63** (1994) 2866.
 - 6) The e-mail address is `jpsj-online@jps.or.jp`.