

Instructions for authors

The Czechoslovak Journal of Physics is published monthly. It comprises original contributions, both regular papers and letters, as well as review articles in all branches of physics. Prior agreement in the case of reviews is required.

The submission must include a cover letter expressing the author's wish to have the paper published in the Journal and provide a postal or e-mail address for correspondence and sending the proof. Authors may suggest several (at least four) referees capable to assess their paper. Upon acceptance, and prior to publication, a signed Copyright Agreement must be delivered to the Editorial Office.

Papers may be submitted either by the regular or electronic mail (see below). In either case, the following general rules should be observed.

All contributions should be written in English. Authors, whose first language is not English, are asked to seek assistance in style, syntax and grammar.

For the style of preparation (title, name(s) of the author(s), address(es), sectioning, footnotes, tables, types of symbols, references, etc.) please consult similar papers in recent issues of the Journal. In particular:

— All papers should have an abstract (preferably 50–200 words). One or more relevant key words, and Classification numbers (no more than two) according to the PACS should be given. (For Physics and Astronomy Classification Scheme, see <http://www.aip.org/pubservs/pacs.html>)

— The symbols and nomenclature according to the Document IUPAP–25 is recommended (for the most common cases, see Appendix 1). SI units are preferred.

— Figures must be provided in a quality suitable for reproduction. For more details, see Appendix 2.

— References to previous works are made in the text with arabic numerals in square brackets in the order of their first appearance. The list of references must observe the following style:

- For journal articles: X.Y. Author(s): Title of the journal. **Volume** (year of publication) page. For example: [4] X.Y. Zee: Czech. J. Phys. **51** (2001) 123.
- For books, reports: X.Y. Author(s): *Title of the book*. Publisher, place, year of publication, pagination if appropriate.
- For collections of contributions (e.g. proceedings): X.Y. Author(s): in *Title of collection* (including data of conference etc.) (Editor(s) in parentheses). Publisher, place, year of publication, pagination.

Papers in course of publication should be entered only if the journal has accepted them and its name is given. A thesis approved for a higher university degree may be listed. Internal laboratory reports may be quoted only if available upon request.

Note: Contributions to conference proceedings must be submitted through the particular conference organizers; the submission details may differ from those given in these instructions.

Electronic submissions

Authors are encouraged to submit manuscripts in an electronic form, preferably via e-mail as Attachments. Huge files (e.g., figures) should be zip-compressed prior to transfer. If necessary, the files can be transmitted by ftp – contact the Editorial Office for ftp details. DOS-formatted 3.5” floppy diskettes, or CD-ROMs (Windows file system) are also accepted.

Manuscripts should be typeset in L^AT_EX (strongly recommended — shorter publication time), RTF or Word. As a back-up, PostScript or PDF files can be sent simultaneously if available.

— L^AT_EX: Class (style) file and a template will be provided by e-mail on request. Alternatively, 10pt (default) standard class (style) “article” with page size parameters `\textheight=41cc`, `\textwidth=28cc` can be used. Avoid the use of custom packages. Figures should be provided in EPS or PS format (EPS 3.0 with no preview, or PS Level 2 are recommended).

— Word: Use page format A4, 12pt size, 1 1/2 spacing. If you need to use Equation Editor, use it consistently (i.e. also for the symbols and expressions occurring within the text). Please observe the recommendations mentioned in Appendix 1 whenever possible. If the figures are not created or edited by Word, it may be more reliable to provide them separately as EPS or PS files, with a list of figure captions.

Parallel submission of a paper (hard copy) version is not required; however, authors should be ready to send one upon request in case of compatibility problems.

Hard-copy submissions

Paper-only submissions are admitted but the authors should be aware of the resulting longer processing time. Even a partial electronic submission (plain text, or some of the figures) may be helpful.

Typewritten manuscript should be submitted in duplicate, in double spacing on numbered sheets of A4 size (21 × 29.5 cm²) with a wide margin on the left. Mathematics should be legible, preferably also typewritten or printed. Be careful in handwriting the symbols and letters, particularly the subscripts and superscripts. Any special type required should be identified in the margin at its first occurrence.

As for figures, original line drawings (or perfect copies) are required. Half-tone photographs should be on glossy paper, unmounted, with as much contrast as possible. Colour figures are not accepted with paper submissions unless provided simultaneously in a usable electronic version (see Appendix 2). The location of figures and tables must be indicated in the margin of manuscript with their numbers in red circles and triangles, respectively.

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Appendix 1. Symbols, units and nomenclature

Czechoslovak Journal of Physics requires the compliance with the recommendations of Document IUPAP–25: Symbols, Units and Nomenclature in Physics¹). Here, only the most frequent cases are covered; please consult the document cited if necessary. Selected examples are accompanied by the corresponding L^AT_EX commands.

The recommendations *equally apply* to the documents typeset in Word or similar text editors. In particular, the Equation Editor (if employed) should be configured to use appropriate fonts for symbols, variables, arrays etc.

Physical quantities

Symbols for physical quantities should be single letters of the Latin or Greek alphabet printed in *italic* (or *sloping*) type. Symbols can have modifying signs – subscripts, superscripts, primes, accents etc.

$a, A, x, X, \gamma, \Gamma, \omega, \Omega$	$\$a, A, x, X, \backslash\gamma, \{\backslashmit\Gamma\}, \backslash\omega, \{\backslashmit\Omega\}\$$
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Indices which are variables or symbols for physical quantities should be printed in *italic (sloping)* type, and indices which are vectors should be printed as vectors (in bold italic). For all other indices, upright roman type should be used.

Examples:

$C_p, g_{ik}, C_g, A_{\max}, k_B$ $\$C_p, g_{ik}, C_g, A_{\backslashrm max}, k_{\backslashrm B}\$$	
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upright indices		sloping indices	
C_g	(g = gas)	p	in C_p
g_n	(n = normal)	n	in $\sum_n a_n \psi_n$
μ_r	(r = relative)	i, k	in g_{ik}
E_k	(k = kinetic)	x	in p_x
X_e	(e = electric)		
A_{\max}			
k_B	(B = Boltzmann)		

Vectors and tensors should be printed in bold type (italic or upright, e.g. **A**, **a**, **A**, **a**), and bold sans serif type (e.g. **A**, **a**), respectively.

$\mathbf{A}, \mathbf{a}, \mathbf{A}, \mathbf{a}, \mathbf{A}, \mathbf{a}$	$\{\backslashboldmath\mathbf{A}, \mathbf{a}\}, \{\backslashbfseries \mathbf{A}, \mathbf{a}, \backslashsffamily \mathbf{A}, \mathbf{a}\}$
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Alternatively, a vector may be indicated by an arrow and a tensor by a double arrow above the symbol; e.g. \vec{A} , \vec{a} , \overleftrightarrow{A} , \overleftrightarrow{a} .

¹) Published in the journal Physics A **146** (1987), pp. 1–68.

Units

Symbols for units of physical quantities should be printed in roman (upright) type.

Examples: MeV, cm, mV, K

Symbols for chemical elements, particles and quanta

Symbols for chemical elements should be written in roman (upright) type. The symbol is not followed by a full stop.

Examples: Ca C H He.

For particles and quanta, it is recommended to use the notation listed in the following table (for quantum states, see the document cited, pp.11–13.):

nucleon	N	pion	π
proton	p	K-meson	K
neutron	n		
		electron	e
Λ -particle	Λ	muon	μ
Σ -particle	Σ	neutrino	ν
Ξ -particle	Ξ		
Ω -particle	Ω	photon	γ
deuteron	d		
triton	t		
helion (${}^3\text{He}^{2+}$)	h		
α -particle	α		

The charge of a particle may be indicated by adding the superscript +, – or 0, e.g. π^+ π^- π^0 , p^+ p^- , e^+ e^- .

The bar “ $\bar{}$ ”, or sometimes the tilde “ $\tilde{}$ ”, above the symbol of a particle is used to indicate the corresponding anti-particle.

Recommended mathematical symbols

General symbols

equal to	=	corresponds to	$\hat{=}$
not equal to	\neq	approximately equal to	\approx
identically equal to	\equiv	asymptotically equal to	\simeq
by definition equal to	$\stackrel{\text{def}}{=}$	proportional to	\sim, \propto
approaches	\rightarrow		
greater than	$>$	less than	$<$
average value	$\langle \dots \rangle$	quantum brackets	$\langle \dots \dots \rangle$

$\approx, \sim, \propto, \langle a|b \rangle$
 $\$ \backslash \text{approx}, \backslash \text{sim}, \backslash \text{propto}, \backslash \text{langle } a|b \text{rangle} \$$

Letter symbols

Letter symbols and letter expressions for mathematical operations should be written in roman upright type.

exponential of x	$\exp x, e^x$	Kronecker symbol	δ_{ij}
base of natural logarithms	e	function of x	$f(x), f(x)$
logarithm to the base a of x	$\log_a x$	total differential of x	dx
natural logarithm of x	$\ln x, \log_e x$	finite increase of x	Δx ²⁾
common logarithm of x	$\lg x, \log_{10} x$	variation of x	δx
signum a	$\operatorname{sgn} a$	variation of f	δf
summation	\sum	product	\prod
limit of $f(x)$	$\lim_{x \rightarrow a} f(x), \lim_{x \rightarrow a} f(x)$		
derivative of f	$\frac{df}{dx}, df/dx, f'$		
partial derivative of f	$\frac{\partial f}{\partial x}, \partial f/\partial x, \partial_x f, f_x$		
total differential of f :	$df(x, y) = (\partial f/\partial x)_y dx + (\partial f/\partial y)_x dy$	$= df$	
...			

$e^x, \ln x, \lg x, \Delta x, \sin x, \tan x, \cot x, \dots$
 $\{\operatorname{rm} e\}^x, \{\operatorname{rm} \ln} x, \{\operatorname{rm} \lg} x, \{\operatorname{rm} \Delta} x, \{\operatorname{rm} \sin} x, \{\operatorname{rm} \tan} x, \{\operatorname{rm} \cot} x, \{\operatorname{rm} \dots}$

Complex quantities

imaginary unit	i, j	
real part of z	$\operatorname{Re} z, z'$	
imaginary part of z	$\operatorname{Im} z, z''$	
...		
	$z = x + iy, \operatorname{Re} z, \operatorname{Im} z, e^{i\omega t}$	
	$z = x + \{\operatorname{rm} i\}y, \{\operatorname{rm} \operatorname{Re}\}z, \{\operatorname{rm} \operatorname{Im}\}z, \{\operatorname{rm} e\}^{\{\operatorname{rm} i\}\omega t}$	

²⁾ Greek upright capital delta, not triangle.

Appendix 2. Preparation of figures

In the ideal case, figures should be provided in an electronic form, either embedded in the source file, or separately, and should not require any further editing (except of small adjustments of the size). Vector graphics is preferred over the bitmap images.

The size of figures should be chosen no larger than necessary for clear demonstration of the investigated features. At this size, the height of the lettering (axis titles, labels, legends) should be 8pt–11pt (points; 1" = 72pt). No letters (incl. subscripts, exponents etc.) should be smaller than 5pt. Note that the maximum target size of figures is the page size ($\approx 125 \text{ mm} \times 180 \text{ mm}$).

Layout of the figures: PostScript fonts Times, Helvetica and Symbol (or True Type fonts Times New Roman, Arial and Symbol, respectively) are recommended. Physical symbols, units etc. in the figures should be typeset following the same conventions as in Appendix 1. Decimal points (not commas) must be used in labels. Magnifications for photomicrographs should be indicated by scale marks on the print, not by magnification ratios in the captions.

Colour figures can be provided for use in the electronic version of the Journal (free of charge). Normally, only Black&White or gray-scale figures will be printed in the paper version. The author(s) must make sure that the colour figures print well on a B&W printer with no significant loss of information, or provide B&W versions of the figures in parallel.

In particular, it is recommended to avoid light colours and very thin lines in colour line plots, and to identify curves or regions also by other means than just the colour (by different dash, thickness, labels...). The lettering should be always B&W. For the pricing of the colour figures in the printed version of the Journal please contact the Editorial Office.

Scanned images of hand-drawn or hand-edited figures, photographs, or figures for which the original electronic version is unusable or unavailable can be also submitted. Please observe the following:

- B&W line plots should be scanned as B&W, at 600dpi resolution for 1:1 reduction, or 300dpi for 2:1 reduction, etc. Do not scan or save B&W figures as grayscale or colour ones, and never use JPEG compression for such images (save as EPS or BMP and compress the files using zip instead).
- Gray-scale or colour — scan at 300dpi for 1:1 reduction. Use JPEG compression only for photographs; if the scanned image contains sharp transitions, lines or text, use TIFF with LZW compression, or EPS or BMP and zip-compress the file).

Preferred format for graphics is Encapsulated PostScript (EPS). PostScript (Level 2) figures are also accepted. \LaTeX users are encouraged to place the figures in the manuscript using `figure` environment and `epsf` or `psfig` macro. Word users can embed the figures in the document but, because of frequent problems with font encodings, submission of separate files for figures in EPS format is preferred.