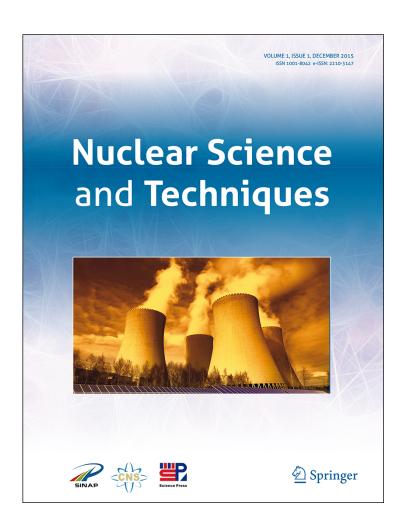




Instructions for authors

Nuclear Science and Techniques

2020年7月17日



ISSN: 1001-8042 e-ISSN: 2210-3147 CN: 31-1559/TL

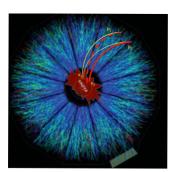
Editor-in Chief: Yu-Gang Ma

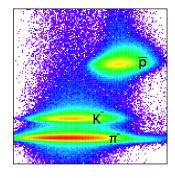
Description

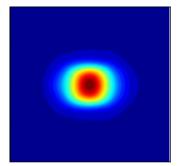
Nuclear Science and Techniques (NST) is an international, peer-reviewed scientific journal sponsored by Shanghai Institute of Applied Physics, Chinese Academy of Sciences and the Chinese Nuclear Society. It was established in 1990 as a quarterly journal and has been changed to a monthly frequency in 2017. It is one of the principal journal in nuclear fields of China.

The journal is devoted to applied nuclear physics; fundamental study of nuclear energy; application of nuclear techniques in various fields; nuclear instruments and methods. The publication of the journal is aimed at enhancing academic exchange between Chinese and foreign scientists, and at promoting development of nuclear science and techniques and their applications.

The journal publishes original papers and review articles on theories, experiments and applications mainly in Synchrotron Radiation Technology and Applications; Accelerator, Ray and Applications; Nuclear Chemistry, Radiochemistry, Radiopharmaceuticals and Nuclear Medicine; Nuclear Electronics and Instrumentation; Nuclear Physics and Interdisciplinary Research; Nuclear Energy Science and Engineering.







Impact Factor

2019: 1.556 © Clarivate Analytics Journal Citation Reports 2020

Abstracted/Indexed In

Science Citation Index Expanded (SciSearch)
Journal Citation Reports/Science Edition
SCOPUS
INSPEC

Google Scholar

EBSCO Discovery Service

INIS Atomindex

INSPIRE

OCLC WorldCat Discovery Service

ProQuest-ExLibris Primo

ProQuest-ExLibris Summon

Editorial Board

Editor-in Chief:

Yu-Gang Ma, Shanghai Institute of Applied Physics, CAS, China

Advisory Board

Jia-Er Chen, Peking University, Beijing, China

Shou-Xian Fang, Institute of High Energy Physics, CAS, China

Ehud Greenspan, University of California, Berkeley, USA

Liu Yuan-Fang, Peking University, Beijing, China

Joe B Natowitz, Texas A&M University, TX, USA

Xiao-Ping Ouyang, Northwest Institute of Nuclear Technology, China

Wen-Qing Shen, Shanghai Institute of Applied Physics, CAS, China

Kang-Long Sheng, Shanghai Institute of Applied Physics, CAS, China

Xiao-Wei Tang, Zhejiang University, China

Jia-Fu Tian, Tsinghua University, China

Yuan-Xi Wan, Hefei Institute of Physical Science, CAS, China

Nai-Yan Wang, China Institute of Atomic Energy, China

Xi Wang, Shanghai Institute of Microsystem and Information Technology, CAS, China

Hong-Jie Xu, Shanghai Institute of Applied Physics, CAS, China

Nu Xu, LBNL, Berkeley, CA, USA

Fu-Jia Yang, Fudan University, China

Editorial Board

Qi An, University of Science and Technology of China, China

Zhu An, Sichuan University, China

Mark J Boland, Australia Synchrotron, Australia

Henry Born, Society of Nuclear Medicine, Korea

John Byrd, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Xiang-Zhou Cai, Shanghai Institute of Applied Physics, CAS, China

Dong-Feng Chen, China Institute of Atomic Energy, China

Jeff Corbett, Stanford Linear Accelerator Center, CA, USA

Yu-Hui Dong, Institute of High Energy Physics, CAS, China

Chun-Hai Fan, Shanghai Institute of Applied Physics, CAS, China

Shen Fu, Hospital of Shanghai, China

Jess Gehin, Oak Ridge National Laboratory, TN, USA

Jian Gong, Chinese Academy of Engineering Physics, China

Ming Gu, Shanghai Institute of Applied Physics, CAS, China

Jian-Hua He, Shanghai Institute of Applied Physics, CAS, China

Jun Hu, Shanghai Institute of Applied Physics, CAS, China

Gang Huang, Shanghai Jiaotong University School of Medicine, China

Huan-Zhong Huang, University of California, Los Angeles, USA

Zhi-Rong Huang, Stanford University, CA, USA

Tomio Inoue, Yokohama University, Japan

Yong-Bin Leng, Shanghai Institute of Applied Physics, CAS, China

Bao-An Li, Texas A&M University, TX, USA

Yong-Ping Li, Shanghai Institute of Applied Physics, CAS, China

Gui-Min Liu, Shanghai Institute of Applied Physics, CAS, China

Ke-Xin Liu, Peking University, China

Zhen-An Liu, Institute of High Energy Physics, CAS, China

Zhi-Fu Luo, China Institute of Atomic Energy, China

Sui-Zheng Qiu, Xi'an Jiaotong University, China

Qun Shen, Brookhaven National Laboratory, NY, USA

Ren-Zhong Tai, Shanghai Institute of Applied Physics, CAS, China

Martin Veselsky, Institute of Physics, Slovakia Academy of Sciences, Slovakia

Dong Wang, Shanghai Institute of Applied Physics, CAS, China

Fan Wang, Medical Isotopes Research Center, Peking University, China

Kan Wang, Tsinghua University, China

Long Wei, Institute of High Energy Physics, CAS, China

Shi-Qiang Wei, University of Science and Technology of China, China

Yue-Zhou Wei, Shanghai Jiaotong University, China

Dane Wilson, Oak Ridge National Laboratory, TN, USA

Yi-Can Wu, Institute of Nuclear Safety, CAS, China

Guo-Qing Xiao, Institute of Modern Physics, CAS, China Yan-Lin Ye, Peking University, China Hong Zhang, Institute of Modern Physics, CAS, China Xiao-Wei Zhang, KEK, Japan Zhen-Tang Zhao, Shanghai Institute of Applied Physics, CAS, China Zhi-Yuan Zhu, Shanghai Branch, CAS, China Ya-Ming Zou, Fudan University, China

Guide for Authors

Types of contributions

Full Length Article: Full length articles are original, high-quality, research papers presenting novel scientific findings. Manuscript should not be less than 5000 words, except Abstract, References, Tables and Figures.

Review Articles: NST invites subject reviews from accomplished researchers and scholars in a broad range of topics within the scope of the journal. Reviews are to be in-depth, critical analyses. Review authors are those who have the demonstrated track record and can write with authority on the proposed topic. We particularly appreciate reviews that provide insights about where the current research is heading and those issues that attract significant research and development in the near and far future. Reviews are by invitation only through the Editorial Board.

Submission checklist

One author has been designated as the corresponding author with contact details:

- E-mail address
- Phone number

All necessary files have been uploaded:

- Source files of the manuscript (.doc file for Microsoft word submission or .tex file for Latex submission)
- All figures (including relevant captions)
- All tables (including titles, description, footnotes)

Further considerations

· Manuscript has been 'spell checked' and 'grammar checked'

- Figures and tables have been numbered consecutively with Arabic numerals and placed in appropriate locations within the text
- All references mentioned in the Reference List are cited in the text, and vice versa
- Cover letter
- Highlights (three to five result-oriented points that provide the main findings)
- Referee suggestions and contact details provided

Before you begin

Preprints

Please note that preprints can be shared on community preprint servers such as arXiv. Sharing your preprints on a preprint server will not count as prior publication.

Changes to authorship

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Submission

Submission to this journal proceeds totally online. Via the homepage of this journal (https://mc03.manuscriptcentral.com/nst) you will be guided stepwise through the creation and uploading of the various files. The system automatically converts source files to a single Adobe Acrobat PDF version of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF at submission for the review process, these source files are needed for further processing after acceptance. All

correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail and via the author's center, removing the need for a hard-copy paper trail.

Referees

Please submit, with the manuscript, the names, present affiliation and current addresses and e-mail addresses of at least 5 potential referees. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

Manuscript preparation

Cover letter

Submission of a manuscript must be accompanied by a cover letter that addresses the following questions: What is the novelty of this work? Is the paper appealing to a popular or scientific audience? Why the authors think the paper is important and why the journal should publish it? In addition to answering these questions, the authors should also describe in one or two paragraphs the significance of their work and what new information is described in the manuscript.

Highlights

Highlights are three to five result-oriented points that provide readers with an at-a-glance overview of the main findings of your article. Think of them as a quick snippet of the results —short and sweet. Each Highlight must be 85 characters or fewer, including spaces, and the Highlights together must clearly convey only the results of the study. Ideas, concepts and methods are best saved for the abstract or "In brief" paragraph. Don't try to capture every piece of data or conclusion. Let the paper do the talking.

Formatting requirements

There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusion, References, Artwork and Tables with Captions.

Figures and tables embedded in text

Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

Latex

You are recommended to use the NST article class nst.cls to prepare your manuscript. Our homepage has detailed submission instructions, templates and other informations.

Article structure

Title

Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

Authors and affiliations

Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. Present the authors' affiliation addresses below the names. Indicate all affiliations with a superscript Arabic numeral immediately after the author's name and in front of the appropriate address. Each affiliation should include department, institution, and complete address, with the ZIP/postal code.

For example: Yu-Gang Ma^{1,2}

¹Key Laboratory of Nuclear Physics and Ion-beam Application (MOE), Institute of Modern Physics, Fudan University, Shanghai 200433, China

²Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201800, China

Corresponding author

Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Corresponding author(s) should be identified with an asterisk. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, references should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Keywords

Immediately after the abstract, provide three to six keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of').

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

Results and discussion

Results should be clear and concise. Discussion should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusion

A conclusion section should be provided in instances where the key elements of the results and discussion may require amplification or clarification. This section should not simply restate the Abstract.

Acknowledgements

List acknowledgements in a separate section at the end of the article before the references. Do not include thanks to anonymous referees or editors, or effusive comments.

Funding

List funding sources in this standard way to facilitate compliance to funder's requirements. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

For example: This work was supported by the National Natural Science Foundation of China (No. xxxx), the 973 National Major State Basic Research and Development of China (No. xxxx), and the Development Program of China (No. xxxx).

Units

Follow internationally accepted rules and conventions: use the International System of Units (SI units).

Math formulae

Please submit math equations as editable text and not as images. Number equations consecutively with equation numbers in parentheses flush with the right margin, as in (1). Be sure that the symbols in your equation have been defined before the equation appears or immediately following.

For example: If volume V and temperature T are known, the ideal gas law can be used to get a reasonable approximation for the pressure of a gas as P = nRT/V, where n is the number of moles of gas and R is the gas constant.

Physical quantities

Physical quantities have both numbers and units, and each physical quantity should be expressed as the product of a number and a unit. Typesetting physical quantities requires care to ensure that the combined mathematical meaning of the number—unit combination is clear. In particular, the SI units system lays down a consistent set of units with rules on how these are to be used. The overall rule is that symbols representing physical quantities (or variables) are italic, but symbols representing units, or labels, are roman. Sometimes there may seem to be doubt as to whether a symbol represents a quantity or has some other meaning (such as a label): a good general rule is that quantities, or variables, can be given a value, but labels cannot. Vectors and matrices are usually denoted using a bold-face (heavy) font, but they should still be italic since they are still quantities.

Figure

Graphs should be self-explanatory, their purpose evident without reference to the text. Relevant nongraphic material, such as the key to the symbolism in the graph, may be included within the confines of the graph frame if it will fit without crowding; otherwise put the explanatory material in the caption.

General points

- Provide images in .tiff or .jpg format at 300 dpi or higher resolution.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Make sure you use uniform lettering and sizing of your original artwork.

- Figures are best prepared at the size you would expect them to appear in print. At this size, the optimum font size is 7pt.
- Text should be placed in the caption, not on the figure.
- Number the illustrations according to their sequence in the text.

Formats

Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

Compound figure

When you have multiple graphs, or graphs and others illustrative materials that are interrelated, it may be most efficient to present them as a compound figure. Compound figures combine multiple graphs into one common figure and share a common legend. The legend of the compound figure must also identify each graph and the data it presents by letter.

Figure captions

Ensure that each illustration has a caption. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Please submit tables as editable text and not as images. Tables should be placed next to the relevant text in the article. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Number the references (numbers in square brackets) in the list in the order in which they appear in the text. Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow

the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web References

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given.

Reference formatting

References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/ book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

Reference style

Reference style should be consistent. Where applicable, author(s) name(s), article title, journal title/book title, volume number/book chapter, the article number or pagination, and year of publication must be present. Use of DOI is highly encouraged. If there are more than three authors, please list the first three authors followed by the phrase et al in place of the other authors' names. The last name should come after the first and middle names. Most journal names in the list of references should be abbreviated, and the authors can find the commonly-used journal name abbreviation from Journal Title Abbreviations.

Examples:

Reference to a journal publication:

[1]M. Yu, K.J. Duan, S.S. Wang et al., A nuclear density probe: isobaric yield ratio difference. Nucl. Sci. Tech. 26, S20503 (2015). https://doi.org/10.13538/j.1001-8042/nst.26.S20503

[2] X.G. Deng, Y.G. Ma, Electromagnetic field effects on nucleon transverse momentum for heavy ion collisions around 100 A MeV. Nucl. Sci. Tech. 28, 182 (2018). https://doi.org/10.1007/s41365-017-0337-1

[3] W.B. He, X.G. Cao, Y.G. Ma et al., Application of EQMD model to researches of nuclear exotic structures. Nucl. Tech. 37, 100511 (2014). https://doi.org/10.11889/j. 0253-3219.2014.hjs.37.100511 (in Chinese)

Reference to a book:

- [4] H. Ibach, H. Lüth, Solid-State Physics, 2nd edn. (Springer, New York, 1996), pp. 45-56
- [5] D.M. Abrams, in *Conductive Polymers*, ed. by R.S. Seymour, A. Smith (Springer, Berlin Heidelberg New York, 1973), p. 307
- [6] R.S. Seymour (ed.), Conductive Polymers (Plenum, New York, 1981)

Reference to a proceeding:

- [7] C. Honsberg, A. Doolittle, M. Allen, et al., GaN betavoltaic energy converters, *Paper Presented at the Thirty-first IEEE Photovoltaic Specialists Conference* (Lake Buena Vista, USA 3–7 Jan. 2005)
- [8] S.-T. Chung, R.L. Morris, in *Abstracts of the 3rd International Symposium on the Genetics of Industrial Microorganisms, University of Wisconsin*, Madison, 4–9 June 1978

Reference to a patent:

[9] L.O. Norman, U.S. Patent 4,379,752, 9 Sept 1998

Reference to a dissertation:

[10] G.N. Yakubova, Dissertation (Department of Nuclear, Plasma and Radiological Engineering University of Illinois at Urbana-Champaign, 2010)

Reference to a e-print:

[11] K. Hattori, S.Y. Li, D. Satow, et al., Longitudinal conductivity in strong magnetic field in perturbative QCD: Complete Leading Order (2016). arXiv:1610.06839

Reference to a website:

[12] Cancer Research UK. Cancer statistics reports for the UK, http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/; 2003 [accessed 13 March 2003].

Reference to a online document:

[13] J. Cartwright, Big stars have weather too. (IOP Publishing PhysicsWeb, 2007), http://physicsweb.org/articles/news/11/6/16/1. Accessed 26 June 2007

After acceptance

Online proof correction

Corresponding authors will receive an e-mail with a link to our e.Proofing system, allowing annotation and correction of proofs online. Our e.Proofing system is a unique solution that will enable you as an author to edit and correct your proof online. The tool is designed to

speed up the correction cycle of your article and move it to the next stage. The system will show you an HTML version of the article with the author's proof corrections highlighted. You can view and edit your article in much the same way as in standard word-processing Software. In addition, you can view/download a PDF version for your reference. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

SharedIt

When your research article is published, an email will be sent to the corresponding author with a shareable link. Corresponding authors are responsible for sharing this link with their co-authors. You can copy the shareable link and provide it to other interested parties or post it anywhere, including via social networks such as Twitter or on scholarly collaborative networks such as ResearchGate or Academia.edu, for non-commercial, personal purposes. Please note that on ResearchGate a SharedIt link cannot be used to upload the full paper, however it can be added as a link within your own personal profile page.

Publication fees

To defray publication costs, authors of accepted manuscripts will be invoiced based on the typeset proofs. Authors are required to confirm at the time of submission that they agree to pay the article publication fees in the event that their manuscript is accepted for publication. Authors are assessed the following fees:

Research articles: \quantiforum 3500 per article up to 8 pages, with no additional fees for color figures or SI. Any fraction of a page over 8 and up to 12 will cost an additional \quantiforum 300 per page, and any fraction of a page over 12 will cost an additional \quantiforum 200 per page.

No fees will be charged for invited articles solicited directly by Editor-in-Chief.