

Cosmic ray studies with neutron detectors

Edited by Juan Jose Blanco, Rolf Bütikofer, Maria Gerontidou, Karl-Ludwig Klein, Olga Kryakunova, Jan Kubancak, Helen Mavromichalaki, Alexander Mishev, Danislav Sapundjiev and Christian Steigies.

The open access series Cosmic ray studies with neutron detectors grew out of an online symposium organised in 2020. The idea for the meeting was brought up within the community organised around the neutron monitor database (NMDB), who felt that research on cosmic rays in the heliosphere employing neutron detectors was a lively activity that needed exchange. The NMDB Meeting 2025 meeting gives us the opportunity to publish a third volume of the series. We encourage all participants to consider this possibility, because this will provide a better visibility on research on and with neutron detectors than the meeting alone. It will also be able to provide a rapid and up-to-date review of the many scientific subjects that our community addresses, and which are usually published in a broad range of journals that no individual researcher scans. We believe that for young colleagues – but not only for them – such a publication will be a unique opportunity to get an overview.

Manuscript submission

Please use the template provided by Kiel University Publishing and submit the file as a Word document (doc or docx). The Publisher will be able to treat the word file in an automated way, so that you need not care for the detailed layout. You will especially not need to place the figures or tables in the text (see specific instructions below). For the same reason LATEX format cannot yet be accepted.

Please send your file to the following cloud folder:

<https://cloud.rz.uni-kiel.de/index.php/s/QEkt2XAXc8DtRnZ>

Author/Correspondence information

Please provide details of the authors in your paper in the following form (Orcid iD if existing):

Christian Steigies [ORCID iD: 0000-0002-1162-536X], Extraterrestrial Physics,
Institute of Experimental and Applied Physics, Kiel University, Germany,
steigies@physik.uni-kiel.de

Rolf Bütikofer [ORCID iD: 0000-0003-2705-9144], Physikalisches Institut,
University of Bern, Switzerland

General formatting notes

Abstract

Preface your paper with an abstract of no more than 1,500 characters. Please also include approx. five keywords under which your text should be found (see, e.g., <https://www.aanda.org/for-authors/latex-issues/information-files#pop> for a list of keywords)

Headings

- Please write your headings and subheadings in down style: The only words capitalized in down style are the first word of the title and any proper nouns that appear in the title.
- Number the headings using Arabic numerals: 1., 2., 3. etc. for main chapters and 1.1, 1.2, 1.3 etc. for subheadings.
- Chapter numbering should be done manually.
- Headings do not end with a full stop.

Numbers and dates

- When giving page sections, please always mention all digits: 31-36 (not 31-6).
- Whenever possible, please use the date convention: yyyy mm dd.

Hyphens and dashes

- Please distinguish the short hyphen (divis) - from the long dash (to-dash) - (key combination: Ctrl+- in the number pad).
- To distinguish syntactical insertions with dashes - as in this example - please use the long dash with spaces before and after.
- To indicate numerical and time periods, use the long dash without spaces: 1971-1988.

Indentation

To indent text, please use the tab key on your keyboard, not spaces.

Highlighting

Please refrain from highlighting, e.g. by bold print, by blocking or underlining. If you nevertheless wish to emphasise, please use italics. Please use this cautiously. Italics should be used in particular to emphasise titles of books and papers, as well as to mark foreign language terms.

Bibliographical references

References within the text

- In the main text, references are indicated by the author's or editor's surname and the year of publication inserted in brackets directly after the citation or reproduction of content, e.g. (Sidelnik 2016).
- The format for citation should be consistent throughout the manuscript. The short citation format should be as follows in the text:
 - one author: (Sidelnik 2016); two authors: (Consolini & Chang 1994); more than two authors: (Kudela et al. 2010); however, please list all authors and editors in the bibliography.
 - several texts by one author: if there are several publications by one author from one year, please differentiate by using lower case letters (Chilingarian et al. 2018a). Also include this differentiating information in the bibliography, e.g.:

Chilingarian, A., Babayan, V., Karapetyan, T., et al. 2018a, The SEVAN Worldwide network of particle detectors: 10 years of operation, Adv. Space Res. 61, 2680–2696, <https://doi.org/10.1016/j.asr.2018.02.030>.

Chilingarian, A., Hovsepyan, G., Soghomonyan, S., Zazyan, M., and Zelenyy, M. 2018b, Structures of the intracloud electric field supporting origin of long-lasting thunderstorm ground enhancements, Phy. Rev. D 98, 082001, <https://doi.org/10.1103/PhysRevD.98.082001>.

- Works by various authors: (Krymsky 1966; Altuchov 1969).
- If the author's name is mentioned in the text anyway, it need not be repeated in brackets: Chilingarian et al. (2018a) have argued...; Sidelnik (2016) highlights....
 - Please always use „and“ in the text to connect authors (not &): Consolini and Chang (1994) have argued
- If you cite editors' works in the body text, do not give ‚ed.‘ in the short reference.
- Please provide a complete bibliography at the end of your paper.

Books/Proceedings

- Mottatt, H.K., Tyinobor, A. (eds.) 1990, Topological Fluid Mechanics. Proceedings of the IUTAM Symposium Cambridge, UK, 13-18 August 1989. Cambridge University Press, Cambridge, http://www.damtp.cam.ac.uk/user/hkm2/PDFs/Mottatt_Tsinobor_1990_CambridgeUniversityPress.pdf (last accessed September 13, 2022).
- Dorman, L. 2004, Cosmic Rays in the Earth's Atmosphere and Underground. Kluwer Academic Publishers, Dordrecht, <https://doi.org/10.1007/978-1-4020-2113-8>.
- Smith, S.K. 2002, Digital Signal Processing. A Practical Guide for Engineers and Scientists. Newnes, Amsterdam et al., <https://doi.org/10.1016/B978-0-7506-7444-7.X5036-5>.

Chapters/Papers in anthologies/proceedings

(Always give all page numbers, please refrain from using ,f.` and ,ff.`)

- Belov, A. 2008, Forbush effects and their connection with solar, interplanetary and geomagnetic phenomena. Proceedings of the International Astronomical Union 4(S257), 439–450, <https://doi.org/10.1017/S1743921309029676>.
- Woods, T. N. 2010, Irradiance Variations During This Solar Cycle Minimum. Astronomical Society of the Pacific Conference Series 428, ed. by S. R. Cranmer, J. T. Hoeksema, and J. L. Kohl, <https://doi.org/10.48550/arXiv.1003.4524>.
- Beer, J., McCracken, K., von Steiger, R. (2012), The Cosmic Radiation Near Earth. Cosmogenic Radionuclides. Theory and Applications in the Terrestrial and Space Environments. Springer, Berlin, Heidelberg, 19–78, https://doi.org/10.1007/978-3-642-14651-0_5.

Papers in journals

(Always give all page numbers, please refrain from using ,f.` and ,ff.`)

- Kühl, P., Banjac, S., Dresing, N., Gómez-Herrero, R. Heber, B., Klassen, A., and Terasa C. 2015, Proton intensity spectra during the solar energetic particle events of May 17, 2012 and January 6, 2014, A&A 576(A120), <https://doi.org/10.1051/0004-6361/201424874>.
- Kudela, K., Ananth, A. G., Venkatesan, D. 1991, The low-frequency spectral behavior of cosmic ray intensity. JGR Space Physics 96(A9), 15871-15875, <https://doi.org/10.1029/91JA011>.
- Melkumyan, A.A., Belov, A.V., Abunina, M.A., et al. 2018, Long-Term Changes in the Number and Magnitude of Forbush-Effects. Geomagn. Aeron. 58, 615–624, <https://doi.org/10.1134/S0016793218050109>.

Online resources

- Please provide as much information as possible. Indicate the date of the last access. Use – if possible –persistent links.
- Ventusky, Web-application for meteo data visualization, in collaboration with Mark Mojžík and Martin Prantl, <https://www.ventusky.com> (last accessed September 13, 2022).
- Web Calculators 2019, INFN of Milano-Bicocca (Italy) and Institute of Experimental Physics in Kosice (Slovakia), <https://www.geomagsphere.org> (last accessed September 13, 2022).

Notes for images, graphics and tables

Images and tables should be submitted separately and in a readable and publishable quality. This means that they should not be inserted into the Word documents. However, placement notes are mandatory in the manuscripts. Please make sure that the images are named consistently in the manuscript.

- Permissible formats
- Illustrations/graphics: jpg or TIF, eps, png
- Tables: jpg, TIF, eps, PDF, Markdown (recommended)
- Logos: eps

Graphics/tables from Excel should be exported as PDF if possible. When writing PDF files, always use the setting option 'Press Quality' or similar.

Image size and quality

- resolution at least 150 dpi, related to the desired image size.
- When designing tables and graphics, please ensure that they are consistent and legible in the final format (A4) of the publication.

Captions

- All images need a caption and numbering. Tables and graphics also require captions and numbering.
- For all images/tables that you have not created yourself, please provide information on authorship, time of creation, source and, if applicable, license.

Image usage rights

When using materials that are licensed under a Creative Commons license, the following must be stated:

- Attribution of the author
- Source reference/link to the original (preferably including the DOI link)
- License incl. version number (e.g. CC BY 4.0)
- Link to the license

If third-party images are used, the copyright holder must be known and named.

The rights holders (authors, publishers, institutions etc.) must have agreed to the use of the material for publishing purposes (electronic publication, unlimited distribution in terms of space and time). Authors generally have the right to be named.

Restrictions on the rights of use must be notified to the publisher when the images are handed over (e.g. exclusion of use for advertising purposes/social media etc.).

All rights of use for images must be obtained before submitting the manuscript! They must be obtained by the authors themselves and, if necessary, at their own expense.

Here is a non-binding sample request letter:

Dear Sir or Madam,

I am currently preparing a paper to issue XY of the series ›Cosmic ray studies‹ with the title XXX. The issue is expected to be published by Kiel University Publishing in spring 2023. It is a scientific publication aimed at a primarily scientific audience [insert more detailed explanations here if necessary].

The publication will be released electronically as a non-commercial open access edition under the Creative Commons Attribution 4.0 International license (CC BY 4.0).

I would hereby like to ask you for permission to use the following image for the mentioned publication: [here as precise as possible details of the image and location where it was found].

The image is to be used [on the cover/inside]. It will take up [the whole / half / quarter of] the page and be reproduced [in greyscale / in colour].

Of course, the illustration will be accompanied by an accurate source reference. Please indicate if you would like specific wording and/or the addition of a specific copyright/licensing notice.

I would be very pleased to receive positive feedback. Please do not hesitate to contact me if you have any questions.

Yours sincerely XXX

Special resource integration

If you wish to include special resources (e.g. research data) in parallel with your publication, please contact the editors or the publishing team at an early stage.