

Cosmic ray studies with neutron detectors

Edited by Rolf Bütikofer, Karl-Ludwig Klein, Olga Kryakunova, Monica Laurenza, David Ruffolo, Danislav Sapundjiev, Christian Steigies and Ilya Usoskin.

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 NMDB2022 meeting gives us the opportunity to publish a second volume. We encourage all participants to consider this possibility, because this will provide a better visibility on research on and with neutron detectors than the online 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.

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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>.
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Books/Proceedings

- Moffatt, H.K., Tsinober, 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/Moffatt_Tsinober_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

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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

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- 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>.

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- 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).

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