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Long-term changes in cosmic rays derived from cosmogenic radionuclides

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Abstract content

Cosmogenic radionuclides can be considered as surrogates for a neutron monitor because they are produced mainly by the interaction of cosmic ray neutrons with nitrogen and oxygen in the atmosphere. Measured in natural archives such as ice cores (^{10}Be) and tree rings (^{14}C) they record the cosmic ray intensity. Compared to manmade neutron monitors their time resolution is low (years) and their signal to noise ratio is relatively small. However, they offer the unique opportunity to reconstruct the history of cosmic rays over at least the past 10'000 years. By comparing records of different cosmogenic radionuclides from different sites the potential and the limitations of this type of neutron monitor is discussed.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olive, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 1 (SH), pages 765-768

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