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Two-detector recordings of GLE's at SANA E

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Abstract content

Ground level enhancements due to solar flare protons have been recorded at Sanae since 1971 by two neutron monitors with different sensitivities to primary protons in the rigidity range < 1 GV to ~ 5 GV. Spectral indexes can be determined from the enhancement ratios of the two detectors if their specific yield functions (SYF) are known. The SYF obtained from latitude surveys and primary cosmic ray proton spectrum had to be adjusted at lower rigidities to yield the power spectral indexes that are determined from enhancements recorded by the world wide network of ground based neutron monitors. Results obtained from the one minute recordings during GLE's of the 23rd solar activity cycle will be presented and discussed. A general feature appears to be that if the IMF was relatively quiet, the rising phase tends to show a harder proton spectrum than during maximum and the decay phase of a GLE.

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'Olivo, 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 201-204

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