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Neutron Flux meter at Basic Environmental Observatory Moussala

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Abstract content

The space weather refers to conditions on the sun, solar wind and Earth's magnetosphere and ionosphere. Several characteristic signatures in cosmic ray may be used for space weather applications on the basis of secondary cosmic ray neutron data. Good examples are the solar proton events and Geomagnetic storms. A possible tool for investigations from Earth the variation of cosmic ray flux is based on registration of secondary cosmic ray neutrons and muons. In this connection a neutron flux meter is developed at BEO Moussala. The final design of neutron flux meter based on gas-filled SNM-15 detectors is presented as well several preliminary experimental and Monte Carlo results. The aim of the complex is to provide with high statistics and precision measure of the absolute secondary neutron cosmic ray flux. The scientific potential of detector complex is promising. Starting from estimation of the dose rate and finishing with space weather applications.

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 657-660

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