



Contribution ID : 296

Type : Oral

Muon diagnostics of the Earth's atmosphere, near-terrestrial space and heliosphere: first results and perspectives

Saturday, 7 July 2007 08:54 (0:12)

Abstract content

Muon diagnostics is a new technique of remote monitoring and forecasting of the development of various dynamic processes in the heliosphere and in the atmosphere and magnetosphere of the Earth based on the analysis of spatial- angular and temporal variations of muon flux simultaneously detected from all directions of upper hemisphere. For practical realization of the technique multi-directional muon detectors (hodoscopes) with large acceptance and high angular accuracy were designed and constructed in Moscow Engineering Physics Institute. First results of data analysis show that registration of muon flux in hodoscopic mode gives unique real-time information about processes in the Earth's atmosphere and also about phenomena in the interplanetary space related with solar activity. The use of muon diagnostics for remote localization of disturbed regions in the Earth's atmosphere and near-terrestrial space and its forecasting potential are also 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 685-688

Primary author(s) : Dr. TIMASHKOV, Dmitry (MEPhI); Ms. BARBASHINA, Nataly (MEPhI); Prof. BOROG, Vladimir (MEPhI); Prof. CAPDEVIELLE, Jean-Noel (College de France); Prof. PETRUKHIN, Anatoly (MEPhI); Prof. SAAVEDRA, Oscar (Torino University); Mr. SHUTENKO, Victor (MEPhI); Dr. YASHIN, Igor (MEPhI)

Presenter(s) : Dr. TIMASHKOV, Dmitry (MEPhI)

Session Classification : SH 3.6

Track Classification : SH.3.6