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Correlations of cosmic ray particle events during thunderstorms with geomagnetic pulsations

Khaerdinov, Mikhail⁰, Khaerdinov, Nail⁰, Lidvansky, Alexander⁰ and Kanonidi, Konstantin¹

⁰Institute for Nuclear Research, Russian Academy of Sciences

¹Pushkov Institute of Terrestrial Magnetism, Ionosphere and radio Wave Propagation, Russian Academy of Sciences

Previously (K. Kh. Kanonidi et al., Strong variations of cosmic ray intensity during thunderstorms and associated pulsations of the geomagnetic field, ASTRA, 2011, vol. 7, pp. 279282) it has been demonstrated by us that some events of short spurious variations of secondary cosmic rays during thunderstorms obviously correlate with geomagnetic pulsations measured locally several kilometers apart from the Baksan air shower array used as a particle detector. Now, an analysis is made of two couple of thunderstorms taking into consideration magnetic data of a remote station (Moscow). Numerous correlations of magnetic pulsations with cosmic ray data are confirmed, but, quite unexpectedly, amplitudes of magnetic pulses turn out to be larger at Moscow magnetic variation station, so that the geomagnetic pulsations are locally suppressed at the region of thunderstorm. Possible implications of this effect are discussed.