

Interactive comment on “Atmospheric electric field anomalies associated with solar flare/coronal mass ejection events and solar energetic charged particle “Ground Level Events”” by E. A. Kasatkina et al.

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Some notion of weather conditions in Apatity on April, 15 2001 can be gained from the data of the “Meteofinfospace” website: <http://www.infospace.meteo.ru> Attention is drawn to the fact that the drifting snow started between 09 and 15UT. The Ez increase observed in the same time interval. This data are intended for acquaintance only. For this reason I appealed in the Russian Hydro-Meteorological Service (Roshydromet) and got a weather certificate in Apatity on April, 15 2001 in 00, 03, 06, 09, 12, 15, 18 and 21 UT. The phenomenon of the drifting snow during periods Ez variations is

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confirmed. At the same time it is known that the intensity of electric field increases and can reach 1000-10000V/m (!) during the drifting snow and snowstorm. On this basis, the cause of Ez variations (the drifting snow or solar flare) cannot be detected. Besides drifting snow, the low cloudiness and light snowfall were observed in Apatity during the measurements on April, 15. The cloud base was about 450 m. The average wind velocity was 5-6 m/s but gusts reached 11 m/s. The attention is drawn to the fact that the atmosphere pressure changed by 21mb. Obviously, it is the evidence of sharp changes of the meteorological situation on this day. The criteria of fair-weather were not observed on April, 15 2001! For this reason the data of measurement on this day must be eliminated. It is important as the author stresses that “Only the 15 April 2001 shows clear evidence for Ez variation associated to SF/CME events”. Thus 2 cases remain. However the episode on November, 4 2001 raises doubts. For example, observations at the meteorological station in Apatity of November, 4 2001 are the evidence of a light snowfall. Low clouds were at about 450-800 m. Meanwhile the absence of precipitation and the low clouds are necessary conditions of fair-weather. Under these circumstances the author’s assumptions that there is the connection between the described Ez variations and solar flares are incorrect. It should be noted that the fact of complete neglect of fair-weather conditions perplexes.

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