

Interactive comment on “Meteorological effects in the lower ionosphere as based on VLF/LF signal observations” by A. Rozhnoi et al.

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Reply to Specific comments of Referee #3

We thank the Referee for his comments. Below we provide answers to the specific queries raised by the Referee.

1. What component of VLF/LF transmitted electromagnetic field was measured?

Really, we missed out to mention in the text that the reception is carried out by electric rod antenna. It measures the electric vertical component of electromagnetic field.

2. When studying the correlation with local meteorological parameters it would be useful to bring some considerations and/or discussion about possible influence of them

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directly onto the physical properties of a field sensor (such as leakage resistance, effective height, vibrations in the fair weather electric field for an electric antenna or in the geomagnetic field for a magnetic sensor) that can affect the registered signal, to separate ionospheric effects.

Yes, influence of local meteorological condition on electric antenna is possible. In very rare cases strong wind can bend an antenna resulting in decreasing of its effective height. In this case we see some drop in the signal level both in day and night time but without anomalies. Form of the signal remains normal. After straightening of an antenna the signal returns to its normal level. We have never seen direct influence of other factors, but if it exists it should be seen both in day and in night signals. It was not so during the period of analysis.

3. Figure 2 and corresponding text in the paper: Please explain what is shown really in the graph because there is a difference in normalization the covariance function and the cross-correlation coefficient.

Figure 2 shows cross-covariance functions calculated in the definite interval. The text and the caption to Figure corresponds each other.

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