

Review of „Testing ground based observations of wave activity in the (lower and upper) atmosphere as possible (complementary) indicators of streamer events“

By M. Kozubek et al.

This is a revised version of the manuscript. In this paper, an attempt is made to relate streamer events during 15 months of analysis, particularly in the Northern Atlantic region, with signatures seen in infrasound and gravity wave recordings from ground-based microbarometer recordings in the Czech Republic, and in local ionospheric Doppler soundings. Comparison of these recordings during streamer events and during more calm conditions without obvious streamers did not reveal a significant streamer signature in the records. The authors found a more disturbed gravity wave propagation during streamer events, but the signature is not strong. The paper is motivated by a possible use of local observations for a quick identification of streamers, in addition to analyse peculiarities of GW during streamer events. Streamer events are identified by partly subjective criteria.

The description of the observations has been improved.

There are several new figures and case studies, which need to be improved before the paper can be published. The content of Figs 5-8 and 11 should be described more clearly. I assume that each "line" of dots is the one of one ray? So, depending on the colours seen near the triangles one can estimate, which turning heights were involved? There is discussion of the effect of the jet stream, but this must be accompanied by presentations of the wind field. It is written that the model signal sources are estimated based in the jet stream, but how? Conclusions are unclear. For example, what does it mean that from Figures 5 – 7 follows that the effects of the streamer event occurs in the limited regions close to the sources? And why does it follow from the InfraGA/GeoAc outputs that signal propagation from sources in the North Atlantic to Central Europe is not significantly modified by the streamer (lines 384-386)? I have difficulties to interpret Fig 11. There are 2 red lines, which do not reach the infrasound arrays. There are 2 sources mentioned for the March 10 simulation (lines 433-434), but only one is discussed.

In their response the authors write that they normalized the data of Fig. 9 (now 14), but still the raw event numbers of events are used so that calm and streamer conditions cannot be easily compared. The conclusions (Lines 562-566) are still not well supported. Still, I do not see "obvious" differences, except for the extreme values. Do you infer the conclusions from the quartiles? Please describe this clearly, and present the differences, and some statistical proof if these extreme values make a significant difference in amplitudes or azimuth.

Minor comments

Line 252: reflects -> is reflected

Line 276: at THE stations

Line 286: in THE infrasound

Line 299: coming -> the

Line 322: consequent -> following

Line 323: streamer -> streamer event

Line 328; the decrease -> a decrease

Line 348: Expected -> predicted

Line 356; Model of -> Modelled

Line 358: insert "(maximum height)" after "turning height"

Figs 5-8, 11: Use the same size

Line 458: Remove leading dot

L 533: expected -> modelled

L 474: In the conclusion the azimuth distribution is mentioned. This need to be discussed with Fig 14.

L 572: spare -> sparse