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## ***Interactive comment on “Features of the Earth surface deformations in Kamchatka peninsula and their relation with geoacoustic emission” by I. A. Larionov et al.***

**I. A. Larionov et al.**

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Dear Giovanni P. Gregori,

Thank you for your interest to our paper. In the article we tried to show that anomalies of acoustic emission which we observe in Kamchatka in fair weather conditions are determined by rock deformations at the point of emission registration. In order to do that, we make simultaneous registration of rock deformations and of acoustic emission. Rock deformations may be determined both by strong remote earthquake preparation and by local effects at the point of observations. We would like to emphasize that rocks in which we register signals are sedimentary ones. According to the data of well-drilling,

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the rocks are composed of a sandy-argillaceous mixture containing detritus and big stones up to the depth of 50 meters. That is, the main source of acoustic emission is plastic deformation. In the rocks with such a structure we register signals of acoustic emission in the range from hundreds of hertz to the first ten of kilohertz. We agree that in the case with hard rocks the main frequency range should be of higher frequencies. Fig. 3 in the bottom shows  $c^{-1}$ , since we estimated deformation rate per a second. It is a misprint, it should be  $s^{-1}$ . Energy class K is one of earthquake characteristics. It denotes the following. Earthquake energy (measured in Joules) is  $E=10^K$ , where K is the given energy class. There is a generally excepted formula to recalculate magnitudes M into energy class K values:  $K \approx 4 + 1.8M$ . Thus, the earthquake with  $K=13.8$  had  $M \approx 5.4$ . Page 4, lines 29-30. In Fig. 5, the left side of all the graphs is marked by a large rectangle and the same rectangle is shown in Fig. 6 in expanded time scale. Thank you very much for the rest of the found misprints. We'll surely consider them in the final version of the paper.

Best regards, Yury V. Marapulets and Igor A. Larionov.

Interactive comment on Solid Earth Discuss., 6, 2401, 2014.

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