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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.

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Dear B.A. Leybourne, Thank you for the interest to our article. In the paper 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 site of emission registration. In order to do that, we make simultaneous registration of rock deformations and acoustic emission. Rock deformations may be determined both by the preparation of a strong remote earthquake and by local effects at the site. We evaluated the statistics of the registered acoustic emission anomalies before earthquakes from 2002 to 2007. It has been ascertained that more than 80% of earthquakes with the energy class of

K>12 at the distance up to 300 km were preceded by acoustic emission anomalies one-three days before an earthquake. But after 54% of acoustic emission anomalies no earthquakes were observed within three days. That means that more than a half of emission anomalies were false ones from the point of view of earthquake precursors. They were also determined by rock deformations, but those were local deformations at the site and were not associated with remote earthquake preparation. Since the nature of acoustic emission anomalies is similar, it is difficult to distinguish if they are associated with earthquake preparation or with local effects at the site. We are classifying emission anomalies at the present time. The registration statistics for acoustic emission anomalies before earthquakes is presented in detail in the paper (Marapulets et al., 2012).

Best regards, Yu. Marapulets and I. Larionov.

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