

Dear Jelle,

Thank you for your appreciation of the paper in its current iteration, it is undoubtedly tied to the substantial contribution from your side.

We have no objection to your comment regarding the assumed location of microbarom generation registered by the Kazakh network in the summer.

We do not refuse our hypothesis, however, we completely agree with you that its wording is rather bold, considering the available evidence data is limited. We have 'toned down' all affected points and noted that additional surveys are required to collect sufficient proof or negative the hypothesis. Possible ways of obtaining incorrect interpretation results are specified individually.

This subject was discussed in the paper in five (5) places, all items and amendments are summarised in the table below.

Kind regards
Alexandr Smirnov

#	Comments from Referees #2	Author's response	Author's changes in manuscript
1	Line 22 ... while signals observed in summer likely originate from sources located in the southern hemisphere.	Statement modified	...while signals observed in summer could originate from sources located in the southern hemisphere, however additional analyses are required to consolidate this hypothesis.
2	Line 191 Figure C2 shows the averaged global source distribution of microbarom sources in summer. The sources are located via cross-bearing considering detections at IS31, KURIS and MKIAR. A hotspot is located southwest of South America.	The sentence and explanation are moved to the discussion section	
3	Line 210. The distances to the source regions differ essentially from summer to winter. For example, simulations predict three source regions at IS31 in winter. Distances to the two regions in the North Atlantic are around 3500 km and 7000 km, and about 7000 km to the North Pacific. In summer, one source region is located in the Pacific Ocean, and two other sources in Southern high latitudes at		The distances to the source regions differ essentially from summer to winter. For example, simulations predict three source regions at IS31 in winter. Distances to the two regions in the North Atlantic are around 3500 km and 7000 km, and about 7000 km to the North Pacific. In summer, one source region is located in the Pacific Ocean and two other sources at Southern high latitudes at distances of ~12000 km and ~18000 km. However, the calculation of attenuation using a range-independent atmospheric model would inevitably lead to great mistakes in such situation.

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4	<p>Line 254 (Discussions) A more complex picture is observed in summer. Some stations detect signals from regions along the peri-Antarctic belt while simulations predict microbaroms with larger amplitude. Other stations detect signals southward, but the detected back-azimuths disagree with the predictions.</p>		<p>Microbarom sources recorded by the Kazakh network in summer are not fully characterized. The cross-bearing location considering detections at IS31, KURIS, and MKIAR yields a hotspot located southwest of South America (Figure C2). Since the localization does not include crosswind effect, the true location may differ significantly from the preliminary estimation. Furthermore, the fact that a signal should pass a considerable portion of the way upwind, would prejudice the likelihood of its registration. However, this preliminary location is consistent with the relatively low amplitude values and larger periods in summer than in winter (Figure C1). Additional studies using more realistic propagation modelling are required to confirm this hypothesis.</p>
5	<p>Line 316 (Conclusions) In summer, microbarom detections at IS31, KURIS and MKIAR are consistent with ocean storms located along the peri-antarctic belt southwest of South America, at distances larger than 15000 km from the arrays, which is consistent with the relatively low amplitude and frequency of the recorded signals.</p>		<p>In summer, the location of microbarom signals using detections at IS31, KURIS, and MKIAR is found southwest of South America, at a distance larger than 15000 km, near the peri-Antarctic belt where strong ocean storms circulate. This location is consistent with the relatively low amplitude and frequency of the recorded signals.</p>