

In the updated version of the article we took in account comments from the reviewers.

In particular,

- We added Fig. 1b, description of the concentration of heavy ions, citation on the article Lovejoy, 1998 and Zaburdaev, 2015;
- We puted more details of Hurst exponent and diffusion coefficient;
- We changed range symbol into “from ... to ...” and changed 2005 - 2015 into the three events (two events in 2005 and one event in 2015);
- We made the stylistic and gramatic correction, edits regarding citation to articles.

All changes are marked in color.

Also the comments of the Topical Editor were taken into account

1. In figures Fig. 4 - Fig. 6, COI region have been shaded.
2. We added to the article information as well as a reference to the article by Speiser, 1970.

All changes are marked in color as well.

Best regards,

Kozak Liudmyla