We thank Editor, Anonymous referee and Martin Truffer for the comments, suggestions, which were almost all implemented into the text of the revised manuscript. The expertise of both referees is helped to improve our manuscript a lot. Further, we listed the our answers to the comments and provided the information on the corrections done.

Answers to the interactive comments given by the Anonymous referee

The referee links the comments to the number of line (in the non-revised text), therefore we will follow them while answering.

Line 22: we agree, corrected.

Line 27: typo is corrected.

Line 30: the reference is added to the text.

Line 34: we agree, corrected.

Line 37: we agree, corrected.

Line 70-71: the text was corrected as follow: … most of precipitation falls as snow (Word atlas, 1997). Rain is rarely observed over the continental coastal areas and ice-free oases."

Line 80: we corrected the list by putting the references in alphabetic order.

Line 80-81: to mention a phenomena of thermal stratification in Lake Reid we corrected the test as follow: "… Most of these lakes are well mixed during the summer seasons (Shevnina and Kourzeneva, 2017), and an exception is only Lake Reid, which has saline water. In this lake, the thermal stratification resistant to the katabatic winds of over 14 ms^{-1} is observed in January 1993 (Kaup and Burgess, 2003)."

Line 105: we would suppose such height range may occur due to various geodesic systems used to measure the elevation of lake tables/stages, however further discussion with Boronina et al., 2020 may help to understand the case.

Line 142: we agree, that the snow measurements do not give true values for the LRT because of various errors, and not accounting for the sublimation from the snow cover is among others.

Line 228: it is good to know that such data exist! We will address our next study to lakes located in the Schirmacher oasis.

Line 249: we agree, that the abrupt level drops in Lake Nella is happen due to melting of the snow dam formed in previous winter(s), and it is not necessary that such drops occur every year (Klokov, 1978).

L272-273 and L277: we corrected the text as follow: "… The hydrological observations on 6 lakes and streams located in the Shirmacher oasis (East Antarctica) date back to early 1980s. These observations cover whole hydrological season lasting from November, 1983 – March, 1984, and further they are used by Loopman and Klokov (1988) to estimate for… …. In these cases, the estimated LRT are 1 and 2.4 years for Lake Smirnova and Lake Pomornik correspondingly (Kaup, 2005). The volume of these lakes is much less than the volume of Lake Nella/Scandrett/LH72 and Lake Progress/LH57. The LRT of Lake Glubokoe is estimated as 2.6 year, and it is almost three times less than for Lake Progress/LH57 which is comparable of volume..."

Line 371: corrected.

Line 372: corrected.

Answers to interactive comments by Martin Truffer

Martin Truffer gives useful general comments in his review and provides detailed suggestions in order to improve the manuscript in the review supplement. Almost all the suggestions were implemented in the revised version of the manuscript. Further, we answer the general comments listed by Martin Truffer:

“1) The manuscript needs to be very carefully checked for language and grammar… ”

The text of the revised manuscript has been be checked for typos, and English language is improved by a professional translator in order to fit the UK English standard.

“2) Results and Discussion should not be mixed into one section… ”

In the revised version of the manuscript, Discussion section is separated from Results section. Discussion is now extended with following explanations: how our results fit to the past scientific records (lines 401-443); why the hydrological observations on the Antarctic lakes are important for a global scale prediction afterwards, specially in fast climate warming (lines 381-388); and what is the next step in the further study of water balance and thermal regime of the glacial lakes (lines 444-451).

“3) The Methods section would benefit from a table that shows which method was used for which lake… “

We have included the new table (Table 2) in the section Methods in the new version of the manuscript. We also explain improved Figure 1 and Figure 2 (both given in the attachment) by given scale bar and legend.

“4) The numbers provided in the tables in ‘Results’ need to be provided with some amount of error estimates… “

It is difficult to provide the numbers in the tables with the precise estimates of the errors inherent to them because this needs a separate study. The errors in the LRT include the uncertainties coming from measuring techniques and methods used to evaluate the terms of the water balance equation, as well as the surface area and volume of the lakes. However we include in the revised text of the manuscript the estimates of uncertainties for the water discharge measurements, area/ volume (lines 283-295) and evaporation (lines 328-333).

“5) The Conclusions should contain some sort of statement of what can be learned from these results in terms of how these lakes function. Do these retention times come as a surprise? Do they change the way we need to think about these lakes?

In the revised version of the manuscript, the section Conclusions is new, and it is includes answers to the questions: What is specific for water exchange for the epiglacial and land-locked lakes? (lines 463-469) What needs to be monitored on the lakes and streams? (lines 470-476)

We also corrected the figures 1 and 2 by given the scale bar instead of the scaling factor, and defined abbreviations of the lake designations in the text after these two figures.

The following references were included to the revised version of the manuscript:

1. Bell R., Banwell A., Trusel L., Kingslake J. Antarctic surface hydrology and impacts on the ice-sheet mass balance. Nature climate change, 2019, doi: 10.1038/s41558-018-0326-3.
2. Borgini F., Colacevich A., Loiselle S., Bargagi R., Short-term dynamics of physico-chemical and biological features in a shallow evaporative Antarctic lakes, Polar Biol, 36: 1147-1160, 2013, doi: 10.1007/s00300-013-1336-2
3. Kaup, E., and Burgess, J.S.: Natural and human impacted stratification in the lakes ofthe Larsemann Hills, Antarctica. In: Huiskes, A.H.L., Gieskes, W.W.C., Rozema, J.,Schorno, R.M.L., van der Vries, S.M. & Wolff, W.J.. Antarctic Biology in Global context, Leiden, The Netherlands: Backhuys Publishers, pp. 313-318, 2003.

4. Leppäranta, M., Luttinen, A., Arvola, L.: Physics and geochemistry of lakes in Vestfjella, Dronning Maud Land. Antarctic Science, 32(1), 29-42. doi:10.1017/S0954102019000555, 2020.
5. Popov, S.V., Sukhanova A.A., Polyakov, S.P.: Using georadar profiling techniques for the safety of transport operations of the Russian Antarctic Expedition // Meteorologiya I Gidrologiya, 2020, # 2, 126– 131 pp. [In Russian]
6. Shevnina E., Kourzeneva E., Potes M.: Evaporation over lakes of the Schirmacher oasis, East Antarctica. In book of abstracts “Complex investigation of the natural environment of the Arctic and Antarctica”, St. Petersburg, Russia, 2-4 March, 2020, doi: 10.13140/RG.2.2.33613.38883
7. Zhelezhnjakov G. V., Danilevich B.B.: Accuracy of the hydrological measurements and estimations. Lenigrad, Gidrometeoizdat, 1966, 240 p. [In Russian]

Elena Shevnina,

on behalf of the authors