

General comments:

Authors sufficiently improved the text and figures. However authors do not provide all the material which they refer to in the text.

Specific comments:

Authors provided enough information on the known ways of Yedoma deposition so the problematic saline layer could somehow fit in the Polygenetic concept. We do not wish to go into terminological debate, however, based on this saline layer case authors could have stressed that it differs from the Yedoma Ice Complex, which is syngenetic permafrost. The saline layer on the other hand could still be Yedoma, but not the Ice Complex. However, some ambiguity about this layer has left in view of pollen data (as shown below).

P10 L28-29 – The youngest date from the ice-wedge is not necessarily contamination. We recommend authors to leave some note on the contamination process in the text or think of the latter explanation, otherwise all the dates from the borehole could have been somehow contaminated.

P12 L19-21 – We did not ask about any unavailable data in our first review. Rather we wonder why the dates from the ice wedge could not be shown by authors. They are widely referred to in the text and should be shown.

P13 L21 – as Konishchev shows in the cited work, the deformations of deposits enclosing ice wedges are not only typical for Yedoma IC but also for other syngenetic ice wedge growth in the soils within some range of mechanical properties. We do not want readers to think of the curved ice layers in contact with ice wedges to be the specific feature of Yedoma IC.

P15 L21 – Redeposition of sediments in thaw bulbs is usually reflected by the younger dates compared to the background dates seen on the same level. In this case the dates of the contact zone and saline layer and in-between are older. Given that authors talk about redeposition in segment six as opposed to segment 5 we disagree that ‘segment 6 is a subsequent part of segment 5’ (P10 L4-5). The accumulation was faster than in the exposures as shown by dating. Could it be a refrozen thaw slump? Redeposition of pollen remains an open question, especially when authors selectively cite Zimmerman’s work for the borehole, but do not show the pollen data from the same aged Yedoma disclosed by exposures. We encourage authors to provide full information on the problematic layer with the subsequent analysis.

P15 L32 -

Technical comments:

P3 L4-5 – Be aware of the new study on Yedoma total carbon (*Shmelev D., Veremeeva A., Kraev G., Kholodov A., Spencer R.G.M., Walker W.S., Rivkina E. (2017) Estimation and sensitivity of carbon storage in permafrost of North-Eastern Yakutia // [Permafrost and Periglacial Processes](#), doi: 10.1002/ppp.1933*). The fresh link would stress the ongoing research, as referred in the sentence.

P3 L14 – mistake in ‘therein’

P5 L5-6 – ‘and is presented here...’ and the dates after – either correct the missing link or restructure the sentence

P10 L4 – dash missing in height asl

P10 L6 – incorrect punctuation

P10 L9 – check the 156% of fine sand

P12 L4 – incorrect punctuation

P15 L31-32 – repeat of ‘the study site’

SOM1 – please specify what is shown in the table mean+-SE or SD and number of samples. Does Buo-02 and Buo-04 represent Yedoma? Column TOC/TN lacks ‘n=’. Please exclude the samples from segment 6 from the values for segment 5, as You pointed out in the text that it is ‘a subsequent part’.

SOM2 – the pictures are hardly seen