

Interactive comment on “Strategy of valid ¹⁴C dates choice in syngenetic permafrost” by Y. K. Vasil’chuk and A. C. Vasil’chuk

Anonymous Referee #1

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Strategy of valid 14C dates choice in syngenetic permafrost

This is a rather unusual manuscript and in my opinion pre-mature to be published. It is not properly organised and large part of it have to be rewritten before doing an in depth review. The quality of English is poor and it is sometimes quite difficult to follow the manuscript. The abstract is not very helpful. It is written in a very general way and hard facts are missing. The introduction part is in my opinion too long and a lot of the same type of information is repeated. A kind of incoherent and loose list of C-14 data is listed. Furthermore, after the long introduction the reader does not know which are the research questions or the hypotheses. The main scope of the paper remains unclear - only at the end of the manuscript one has a kind of a vague idea.

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As a reader one realises quite soon that a lot of C-14 date inversions may occur. Ok. And now? The title surmises that a general and new strategy will be presented (maybe even by presenting a kind of scheme with decision nodes). But nothing like that is shown.

The authors try to show that a ‘principle of the youngest age’ exists. But no convincing data and arguments are shown. Some references are given to ‘proof’ this fact (and as reader, one is forced to obviously read all these papers and find the arguments). ‘...as obtained by the authors (Vasil’chuk, 1992, 2006, 2007, 2009, 2013; Vasil’chuk and Vasil’chuk, 1997, 1998; Vasil’chuk et al., 2000a, b, 2004) and published elsewhere (Sulerzhitsky, 1982; Pewe et al., 1977; Fukuda et al., 1997; Schirrmeyer et al., 2002a, b, 2003, 2008, 2010; Wetterich et al., 2009, 2014 and others) has revealed the important role of ancient redeposited material in syncryogenic sediments throughout the Russian Arctic, as well as offering the principle of choosing the youngest date as the most reliable.’ Based on this the final conclusion is derived that ‘The youngest 14C date from the data set in the particular horizon is closest to the actual time of accumulation and freezing of the yedoma sediment.’ As a reader, one has no chance to follow the argumentation.

Consequently, I strongly recommend the authors to rearrange the manuscript in a way that also others can easily follow their argumentation. The manuscript seems to be a kind of a review paper (something that is nowhere stated). I think that the paper has a certain potential and that some valuable information could be shown. But with the actual state of the manuscript, this is unfortunately not possible.

Interactive comment on The Cryosphere Discuss., 8, 5589, 2014.