Interactive comment on "Distinguishing between old and modern permafrost sources 1 with compound-specific δ^2H analysis" by Jorien Vonk et al.

Anonymous Referee #1

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This is an extraordinary set of data, where the authors have collected a set of samples in an area not much studied, and analyzed these samples using impressive analytical techniques. The data are well presented and statistically treated and the manuscript is easy to follow. Unfortunately the results are not that exiting as most of the results mainly confirm earlier findings. The few new conclusions are not striking as both the variability within the data are substantial and source values used in the assessment have uncertainties. Nevertheless publication of this contribution could be justified because of the rareness of the data. I leave it to the editor to make the final judgment on this. If a positive decision is made I have no other detailed comments than the references need to be looked over. Some of them even lack publication year.

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Interactive comment on The Cryosphere Discuss., doi:10.5194/tc-2017-17, 2017.