

Clim. Past Discuss., author comment AC1
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Reply on RC1

Julien Westhoff et al.

Author comment on "Melt in the Greenland EastGRIP ice core reveals Holocene warm events" by Julien Westhoff et al., Clim. Past Discuss.,
<https://doi.org/10.5194/cp-2021-89-AC1>, 2021

Dear reviewer,

Thank you for the review of our manuscript.

You are indeed right that melt events are rather short-lived events, yet they do seem to coincide with warm periods. We will go into more detail analyzing these connections.

We have had a look into the weather stations data from the Danish Meteorological Institute (DMI, <https://www.dmi.dk/publikationer/>). In a publication from 2000, we find a table of maximum measured air temperatures for stations around Greenland and on the ice sheet (https://www.dmi.dk/fileadmin/user_upload/Rapporter/TR/2000/tr00-18.pdf, page 49). Stations around the coast, as also Alert in arctic Canada, do indeed show maximum temperatures above zero degrees Celsius in the winter. Yet Summit station has maximum values well below freezing throughout the winter and we can therefore be more confident that melting on the central Greenland ice sheet is restricted to summer. Unfortunately, a detailed analysis of weather stations around Greenland will exceed the scope of this work.

We agree that our statement on the Viking voyages was too definite and we have removed all causalities from our statement. We intend to mention it as a coincidence of events.

Best regards,

Westhoff et al.