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Climate of the Past Discussions

Interactive comment on "Varying regional δ^{18}O–temperature relationship in high resolution stable water isotopes from East Greenland" *by* Christian Holme et al.

Anonymous Referee #2

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The authors demonstrate new high-resolution stable water isotope records from Renland peninsula (East Greenland) and make an attempt to establish the relationship between the isotopic composition and the regional instrumental air temperature data. They show that the temperature in the condensation site is not the only driver, the other factors like sea ice concentration in the nearby ocean and possibly regional circulation pattern (NAO) being important. Thus the complex nature of the isotopic composition of the atmospheric precipitation is clearly demonstrated. The obtained results are important for the interpretation of the isotpic content of the fossil precipitation retrieved as firn and ice cores by means of deep drilling of the polar ice sheets.

To my opinion, the manuscript can be published with minor revisions, as listed below:

Page 1, lines 6-7: consider rewording, e.g. "and examine which amount of this variability could be attributed..."

Page 2, line 2: from the context of this paragraph it's clear that you are talking about polar ice sheets, so it's better to write "polar ice sheets" instead of "ice caps" here.

Page 3, line 3 - the resolution of the map in Figure 1 does not really allow to see it.

Page 3, line 5 and below - Inland or inland?

Page 3, line 14 - "as we here have" sounds awkward for me.

Page 9, line 2 - in order to filter out

Page 14, line 7 - unwanted comma in the end of the sentence

Page 14, line 11 - should be 1821-1909?

Page 15, line 21, and Figure 11 - the term "normalized" is usually defined by (value - mean)/standard_deviation. What is shown here is a temperature anomaly (= deviation from mean).

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