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# *Interactive comment on* "Evaluation of the warming structure in the Arctic" *by* C. E. Chung et al.

**C. E. Chung et al.**

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I thank the reviewer for 1) a careful reading of the manuscript, 2) finding our study useful and 3) giving us constructive suggestions. We will incorporate all of your suggestions.

Regarding the significance test the reviewer suggested, we would like to clarify our position. Significance testing is a hypothesis testing, and thus is in need of a hypothesis. In order to assess the significance of a computed trend, we need to develop a hypothesis. A common hypothesis (i.e., a null hypothesis) is that a time series of limited period (which always gives some trend) is from an infinitely long time series without any trend.

In our study, we calculated the trend for the period 1979-2011 and the trend for the period 1998-2011. If the hypothesis is no trend in a long time series, it does not make

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sense to assess the significance of the obtained 1979-2011 trend and also the significance of the obtained 1998-2011 trend. Thus, we will only assess the significance of the 1979-2011 trend.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 21927, 2013.