

## ***Interactive comment on “A note on the statistical evidence for an influence of geomagnetic activity on JRA-55 northern hemisphere seasonal-mean stratospheric temperatures” by Nazario Tartaglione et al.***

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We are not sure we have fully answered the following point: (C2) removal of the respective components from the time series may potentially result in higher (and statistically more significant) contrast between temperatures pertaining to low/high geomagnetic activity periods.

Answer: It is not clear to us what the reviewer means with “removal of the respective components from the time series”. The used procedure does not remove any data

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neither performed we a sub-sampling of data. In such a case, we would throw away most of our data and important information. Instead, as the serial correlation leads to overestimates of statistical significance, the effective number of degrees of freedom can be much smaller than the sample size would indicate. What the procedure does to deal with the serial correlation is to account for this loss of degrees of freedom by calculating the "effective" sample size, that is the number of independent data.

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Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2019-156>, 2019.

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