Supporting Information for "The Influence of Large-Scale Spatial Warming on Jet Stream Extreme Waviness on an Aquaplanet"

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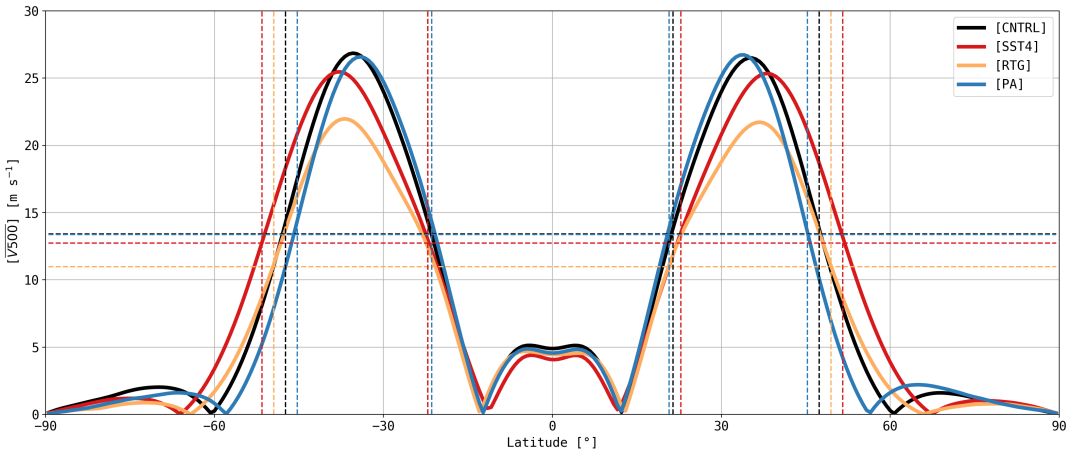

Figure S1. Time mean zonal mean of the magnitude of the 500-hPa horizontal wind vector $[\overline{V_{500}}]$ [m s^{-1}] for each simulation. Horizontal dashed lines show the half of the maximum $[\overline{V_{500}}]$ thresholds and vertical dashed lines the latitude range where this thresholds was exceeded. These latitude ranges are used to estimate the modified Sinuosity Index.

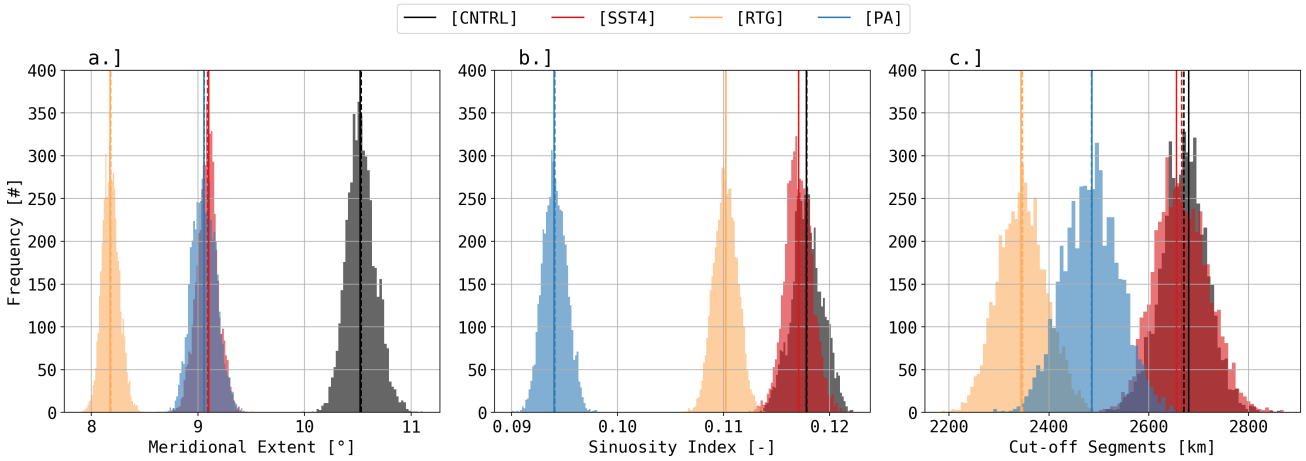

Figure S2. Distributions of the interquartile ranges of (a) meridional extent [°], (b) Sinuosity Index [-] and (c) cut-off segments length [km] for each simulation obtained from bootstrapping. In this process, we iteratively resample the data 5000 times for each simulation and diagnostic and maintain the same sample size of the original datasets. Subsequently, interquartile ranges are computed for each of these 5000 resamples. The dashed vertical lines are the means of the distributions and the continuous vertical lines are the interquartile ranges from the original datasets (Figure 3).

Table S1. P-values from quantile test, Brown-Mood test and student's t-test that tests 6-hourly distributions ($N = 2 \times (10 \times 365 \times 4) + 2 \times (8) = 29216$, because we simulate ten years, including two leap years, of two identical hemispheres). For the quantile test on the 98^{th} the alternative hypothesis 'less' is chosen. Hence, it tests if the probability of the 98^{th} percentile of the experiment simulation has higher values than the [CNTRL] simulation. A Brown-Mood test is identical to a two-sided quantile test at the 50^{th} percentile. P-values of student's t-test that tests interquartile range distributions obtained by bootstrapping (N=5000). P-values lower than p=0.01 are bold and there the simulation differ from the [CNTRL] simulation in a statistically significant manner on the 99% confidence interval. P-values smaller than p=0.0005 — and larger than zero — are shown with **p<0.000**.

Quantile test (98^{th} percentile):

[CNTRL] vs.	Meridional Extent	Sinuosity Index	Length Cut-off Segments
[SST4]	**p<0.000**	**p=0.001**	**p<0.000**
[RTG]	**p<0.000**	**p<0.000**	**p<0.000**
[PA]	**p<0.000**	**p<0.000**	**p=0.004**
Brown-Mood test (50^{th} percentile):			
[CNTRL] vs.	Meridional Extent	Sinuosity Index	Length Cut-off Segments
[SST4]	**p<0.000**	**p<0.000**	p=0.054
[RTG]	**p<0.000**	**p<0.000**	**p<0.000**
[PA]	**p<0.000**	**p<0.000**	p=0.023
Student's t-test:			
[CNTRL] vs.	Meridional Extent	Sinuosity Index	Length Cut-off Segments
[SST4]	**p<0.000**	**p<0.000**	**p<0.000**
[RTG]	**p<0.000**	**p<0.000**	**p<0.000**
[PA]	**p<0.000**	**p<0.000**	**p<0.000**