**Grant Number**: N/A

**Sponsor:** NERC

**Project title**: An explanation for the metric dependence of the midlatitude jet waviness change in response to polar warming

The following files have been archived for each of the 9 idealised aquaplanet simulations described in the associated publication (see reference below; folder names correspond to experiment names as described in the reference). All simulations were performed using the Isca climate modelling framework: <https://github.com/ExeClim/Isca>

|  |  |
| --- | --- |
| **File name** | **File description (Short description of content, sample size, format, any linking between different types of data, i.e. survey and interviews/focus groups)** |
| time\_mean\_climatologies.nc | NetCDF file containing time-mean simulation data, averaged over 80 years.  Data covers the full globe and has 20 vertical pressure levels and a spatial resolution of ~1.4 degrees. |
| sinuosity.nc | NetCDF file containing time series of jet sinuosity (sinNH, sinSH) for the northern and southern hemispheres.  Data spans 80 idealised model years, with no spatial dimensions. |
| mci.nc | NetCDF file containing time series of meridional circulation index for the northern and southern hemispheres (mci\_nh, mci\_sh), averaged over latitude and longitude between 40-60°  Data spans 80 idealised model years, with no spatial dimensions. |
| LWA.nc | NetCDF file containing time series of local wave activity for the northern and southern hemispheres (lwa, lwa\_sh), averaged over latitude and longitude between 40-60°.  Data spans 80 idealised model years, with no spatial dimensions. |
| LWA\_tzmean.nc | NetCDF file containing time and zonal mean of local wave activity (lwa, lwa\_sh) for the northern and southern hemispheres.  Data spans 80 idealised model years, with a latitude resolution of ~1.4 degrees. |
| LWA\_extent.nc | NetCDF file containing time series of local wave activity extent for the northern and southern hemispheres (lwa\_sum, lwa\_sum\_sh), averaged over latitude and longitude between 40-60°.  Data spans 80 idealised model years, with no spatial dimensions. |
| LWA\_extent\_tzmean.nc | NetCDF file containing time and zonal mean of local wave activity extent for the northern and southern hemispheres (lwa\_sum, lwa\_sum\_sh.  Data spans 80 idealised model years, with a latitude resolution of ~1.4 degrees. |
| wave\_amplitude\_nh.nc | NetCDF file containing wave amplitudes for the northern hemisphere (amplitude\_of\_ZN\_sum\_from\_1\_15), and the isopleth values used in calculating these (Z1-7).  Data spans 80 idealised model years, with no spatial dimensions. |
| wave\_amplitude\_sh.nc | NetCDF file containing wave amplitudes for the southern hemisphere (amplitude\_of\_ZN\_sum\_from\_1\_15), and the isopleth values used in calculating these (Z1-7).  Data spans 80 idealised model years, with no spatial dimensions. |

**Publications**: (based on this data, if any)

Geen, R., Thomson, S. I., Screen, J. A., Blackport, R., Lewis, N. T., Mudhar, R., Seviour, W. J. M. and Vallis, G. K. (2023). An explanation for the metric dependence of the midlatitude jet waviness change in response to polar warming. *Submitted to Geophysical Research Letters*