**Getting started**

The long run data from the 1000 year run of the baseline model is stored on Tahiti (Joy’s server). Ensure that you have access to this.

* All the analysis is in the form of Jupyter notebooks.
* Upload these notebooks to Tahiti and run it there

**Heatwave identification** (heatwave\_identify notebook)

* Identify heatwaves across the 1000 years
* Identifies heatwaves for a box between 40N and 50N latitude (can change this at the start of the second cell)
* Saves this info to file, and is loaded to plot the heatwave intensity-duration scatter

**DSE calculation** (DSE\_analysis notebook)

* Computes DSE in the box across the heatwaves identified
* Similarly, computes DSE tendency in the box
* For the vertical wind computation in DSE tendency, the hybrid sigma coordinates are needed. The file that needs to be loaded (model\_sigma) is included.
* See the model\_sigma notebook to see how this file is made, it creates a model similar to the one we use and stores the sigma\_pressure\_(a,b)\_coordinates.
* Finally, we show that low-level temperature during heatwaves is correlated with DSE. Also, the DSE change between days is accounted for the DSE tendency, giving us a sufficiently closed budget.