**Reconstructing Monthly Global Mean Surface Temperatures from its Forcing Factors 1891-2015**

This section on C20C+ projects attaches the key data sets used in the following open access paper:

**Folland, C.K., O. Boucher, A. Colman and D.E. Parker, 2018: Causes of irregularities in trends of global mean surface temperature since the late 19th century. *Science Advances,***. **4, eaao5297 (2018).**

Only the normalised external and internal climate system forcing data, the global mean surface temperature data and CMIP5 data used in the paper are attached. This is enough to reproduce the results in the paper. The data are firstly shown in ascii form, where the titles of each line are listed in numbered order before the data are listed. They are also listed as a pdf file to help with interpretation of the asci file where the header describing the data is placed above each separate column of data.

Other data sets discussed in the paper that contribute to these key data are either available from the author or the Met Office HADOBS data site: http://hadleyserver/. The trend results in the paper use a special form of iterative trend analyses suitable for short data sets with strong persistence called restricted maximum likelihood. This is described in detail in the Supplementary Materials to the paper.