Poles Apart: Why has Antarctic sea ice increased and why don't coupled climate models reproduce observations, climate model data – Additional Information

Model Simulation ID's

Output fields from 10 model simulations have been included in this resource. Files are saved in individual model run folders, identified by their simulation ID. That simulation ID represents the experiment ID from the NCAS PUMA (Providing Unified Model Access) system. These simulation IDs refer to a simulation which is:

xlaya – pre-industrial control

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of 1860s.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayc – Greenhouse Gas

Greenhouse Gas Concentrations: representative of 2013.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of 1860s.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlaye – Idealised El NIno

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of 1860s.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900 with addition of a large El Nino.
Sea Ice: 12 month repeating annual average of 1861-1900 with addition of a large El Nino.

xlayf – Idealsied La Nina

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of 1860s.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900 with addition of a large La Nina.
Sea Ice: 12 month repeating annual average of 1861-1900 with addition of a large La Nina.

xlayg – Anthropogenic Aerosols

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of year 2000.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayi – All Forcing

Greenhouse Gas Concentrations: representative of 2013.
Atmospheric Chemistry: representative of 1999.
Aerosol Emissions: representative of year 2000.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayk – Aerosols & Greenhouse Gases

Greenhouse Gas Concentrations: representative of 2013.
Atmospheric Chemistry: representative of 1860s.
Aerosol Emissions: representative of 2000.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayl – Ozone & Aerosols

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1999.
Aerosol Emissions: representative of 2000.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayo – Ozone & Greenhouse Gases

Greenhouse Gas Concentrations: representative of 2013.
Atmospheric Chemistry: representative of 1999.
Aerosol Emissions: representative of 1860s.
Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

xlayp – Ozone

Greenhouse Gas Concentrations: representative of 1860s.
Atmospheric Chemistry: representative of 1999.
Aerosol Emissions: representative of 1860s.

Sea Surface Temperatures: 12 month repeating annual average of 1861-1900.
Sea Ice: 12 month repeating annual average of 1861-1900.

Additional Files

Start Dumps – The file used to initialise each simulation is included in each folder.

SST/Sea Ice Ancillary Files – These files represent the sea surface temperature and sea ice lower boundary condition files used within these model simulations.

Chemistry Set Up – As a partition was applied between the UKCA chemistry and HadGEM3 radiation schemes, additional files were required to initialise either a pre-industrial or ozone hole chemistry within UKCA. The relevant chemistry files for each simulation.

basis_RUNID – These files are an output from the PUMA system, which provides details on the model set up. Copying a BASIS file into the PUMA system would allow the user to load the job without finding the original on the system.