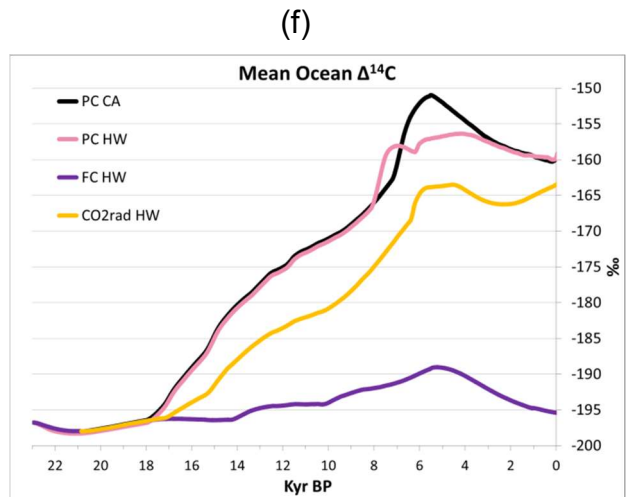
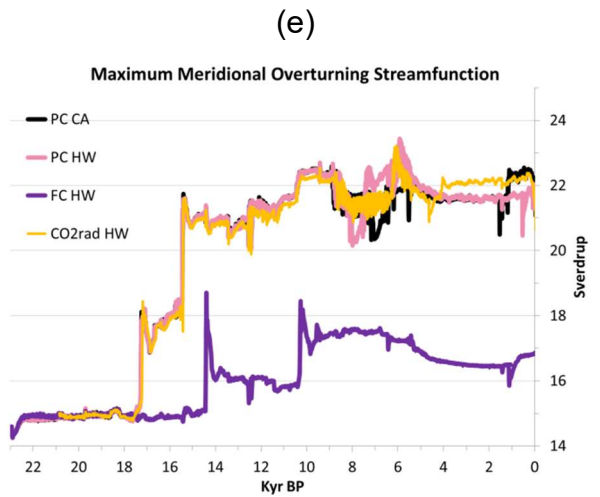
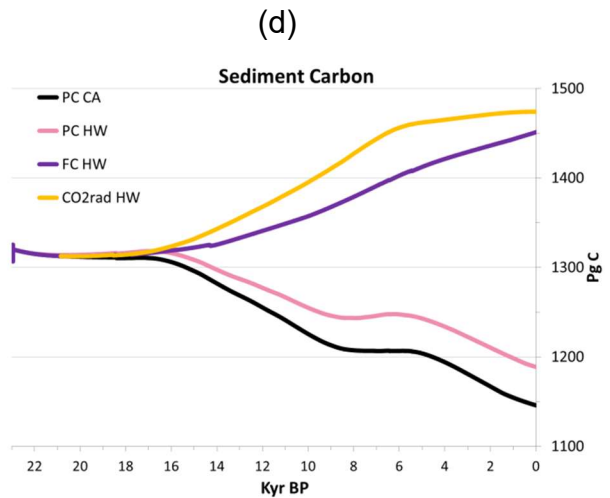
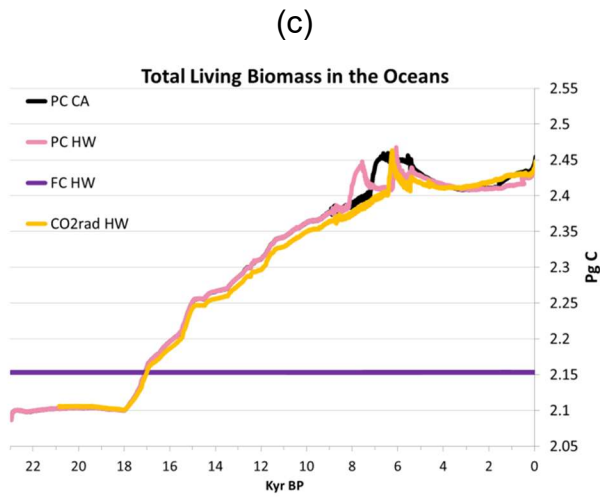
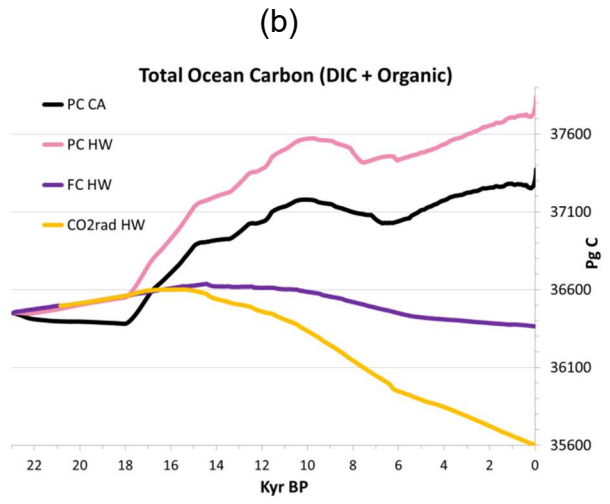
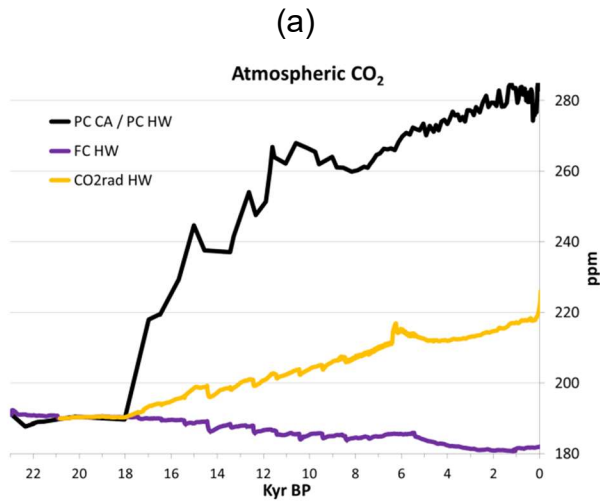
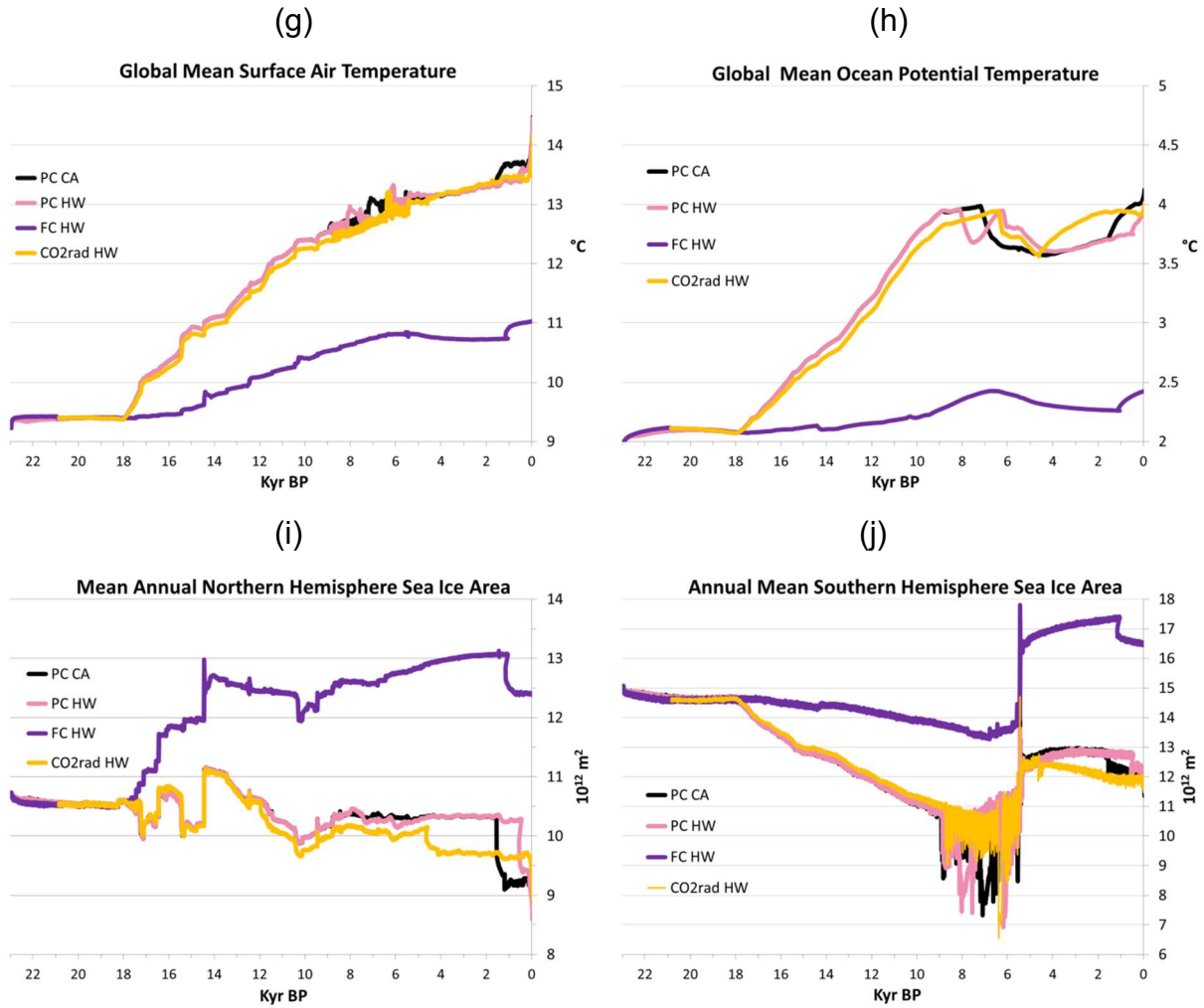
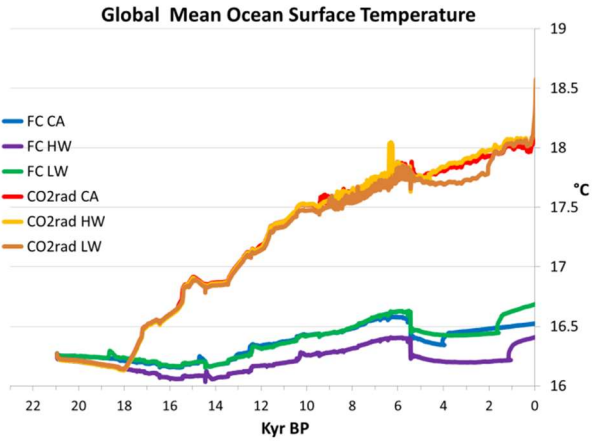


Supplementary Figures





Supplementary Fig. 1: Time series results from the LGM to the present for Prescribed Carbon simulations (a 'Volcanic Release' scenario) PC CA (black line) and PC HW (pink line) set adjacent to the FC HW (purple line) and CO2rad HW (orange line) simulation for a scale comparison with other time series in the main text. The plots represent (a) atmospheric CO₂, (b) total ocean carbon, (c) organic ocean carbon (living biomass), (d) total sediment carbon, (e) global maximum meridional overturning streamfunction, (f) $\Delta^{14}\text{C}$, (g) global mean surface air temperature, (h) mean ocean potential temperature, (i) northern hemisphere mean annual sea ice area, and (j) southern hemisphere mean annual sea ice area.



Supplementary Fig. 2: The time evolution of global annual mean ocean surface temperature (on a scale of 16 to 19°C) for the simulations without high latitude carbon.