

An efficient method to generate a perturbed parameter ensemble of a fully coupled AOGCM without flux-adjustment – Supplementary material

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This supplement consists of 3 tables that list results and parameter values for each ensemble member. Supplementary table 1 lists the parameter values and the final equilibrium temperature. Supplementary table 2 lists the performance of the ensemble members in the pre-industrial for a number of metrics. Supplementary table 3 lists the performance of the ensemble members at 4xCO₂ for a number of metrics.

Supplementary table 1. This table shows a list of the parameter values and global mean temperature values after 800 years of pre-industrial control run for the 21 accepted runs and the 6 failed runs (shown in grey). The VDIFF parameter consists of two linked parameters: the initial diffusivity at the surface, KAPPA0_SI, and the rate of increase of diffusivity with depth, DKAPPA_DZ_SI.

Supplementary table 2. This table shows a comparison between the members of the ensemble and a combination of observations and the CMIP3 ensemble in the pre-industrial. Failed ensemble members are shown in grey and values outside of the range used for comparison are shown with bold text. Most comparisons are made with the CMIP3 ensemble (Meehl et al., 2007) but the temperature and overturning constraints are against observations (Jones et al., 1999, Brohan et al., 2006, Solomon et al., 2007)

Supplementary table 3. This table shows a comparison between the members of the ensemble and a combination of observations and the CMIP3 ensemble at elevated CO₂. Failed ensemble members are shown in grey and values outside of the range used for comparison are highlighted in bold. comparisons are made with the CMIP3 ensemble (Meehl et al., 2007).

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