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Supplementary Information for:

Striking stationarity of large-scale climate model bias patterns under strong climate change

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Figs. S1 to S14

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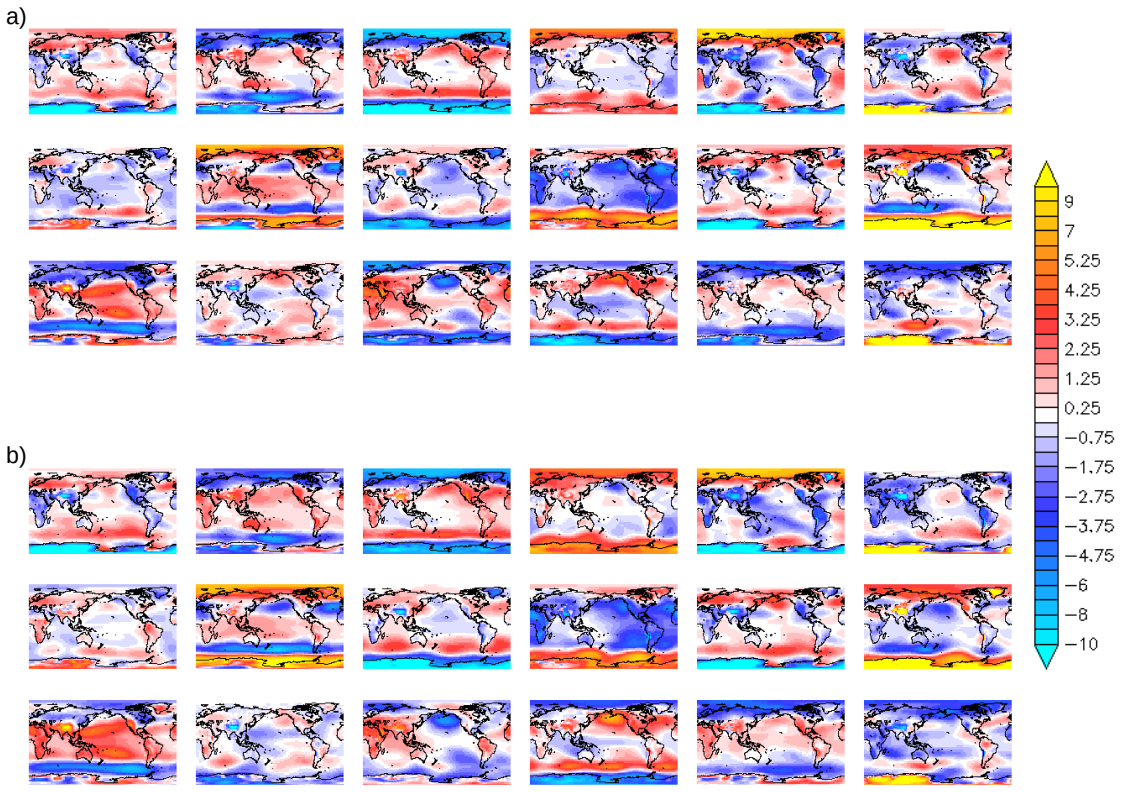

Fig. S1. Sea-level pressure error patterns (hPa) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

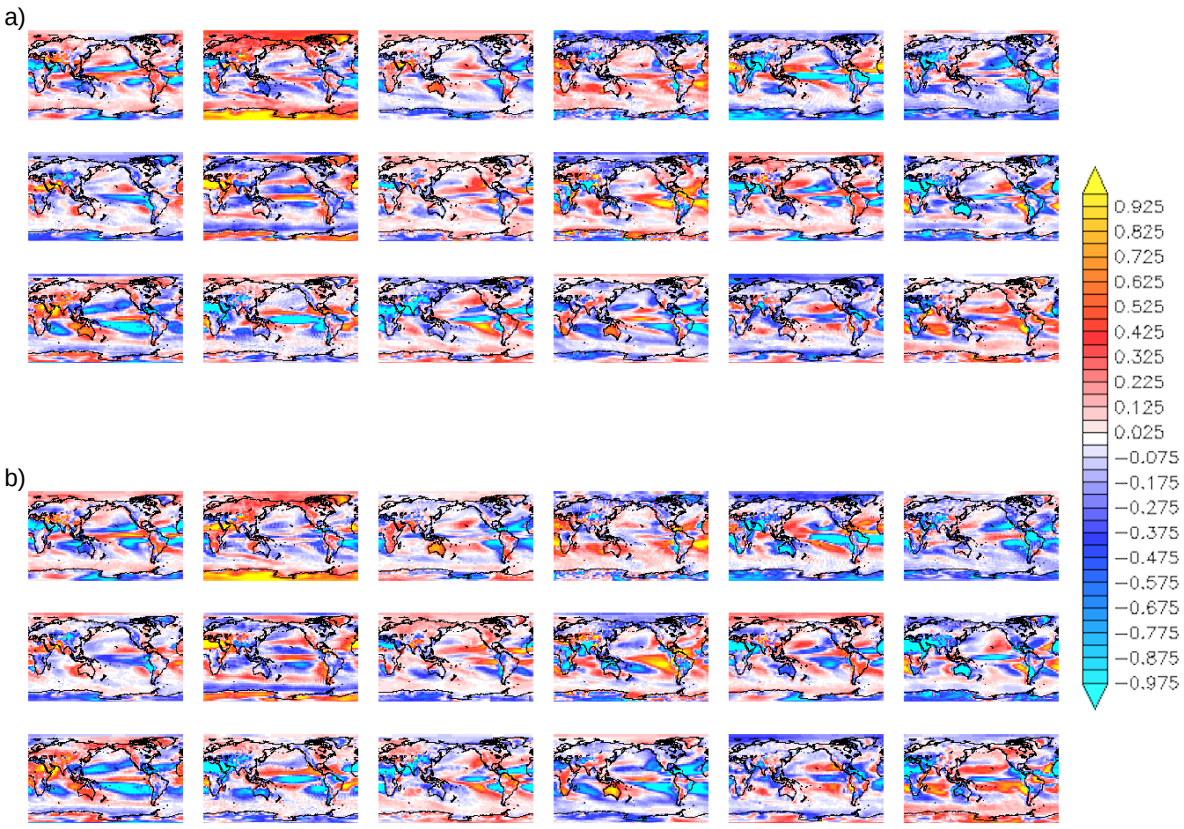

Fig. S2. Precipitation error patterns (dimensionless) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

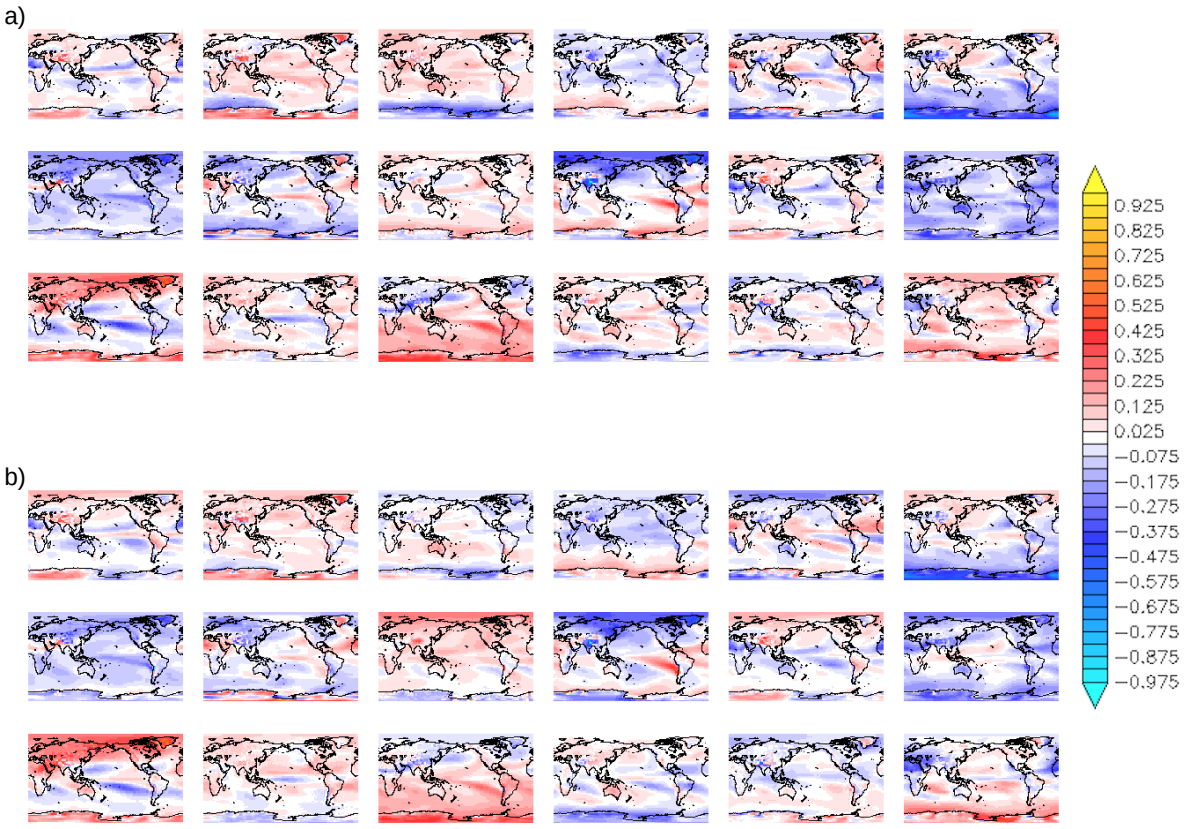

Fig. S3. Precipitable water error patterns (dimensionless) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

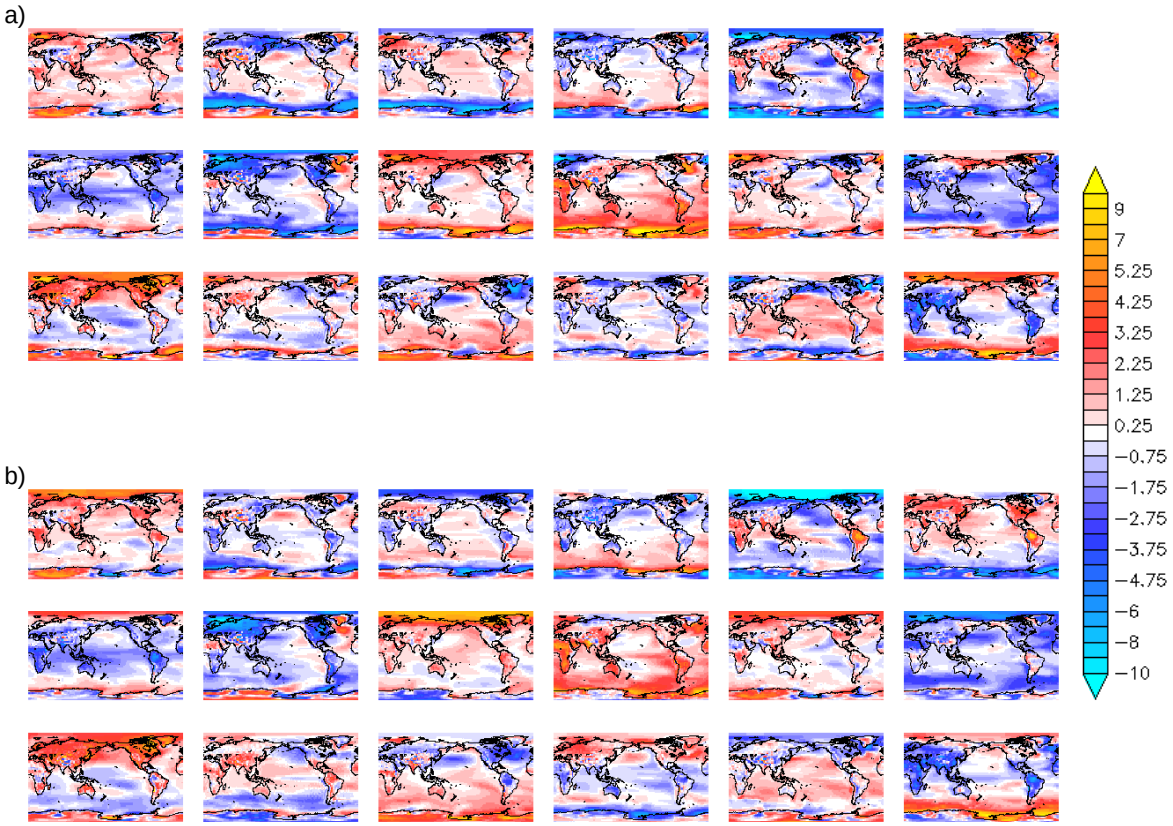

Fig. S4. Surface air temperature error patterns (°C) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

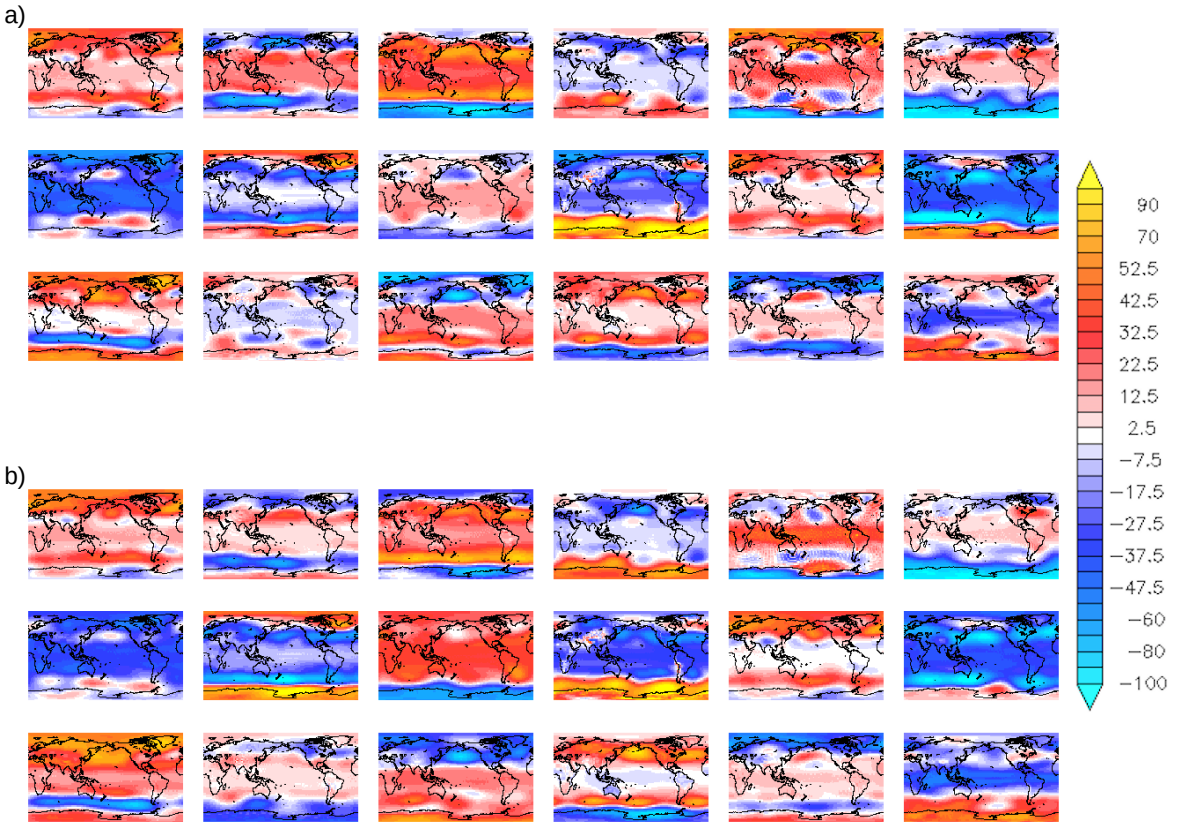

Fig. S5. 500 hPa geopotential height error patterns (m) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

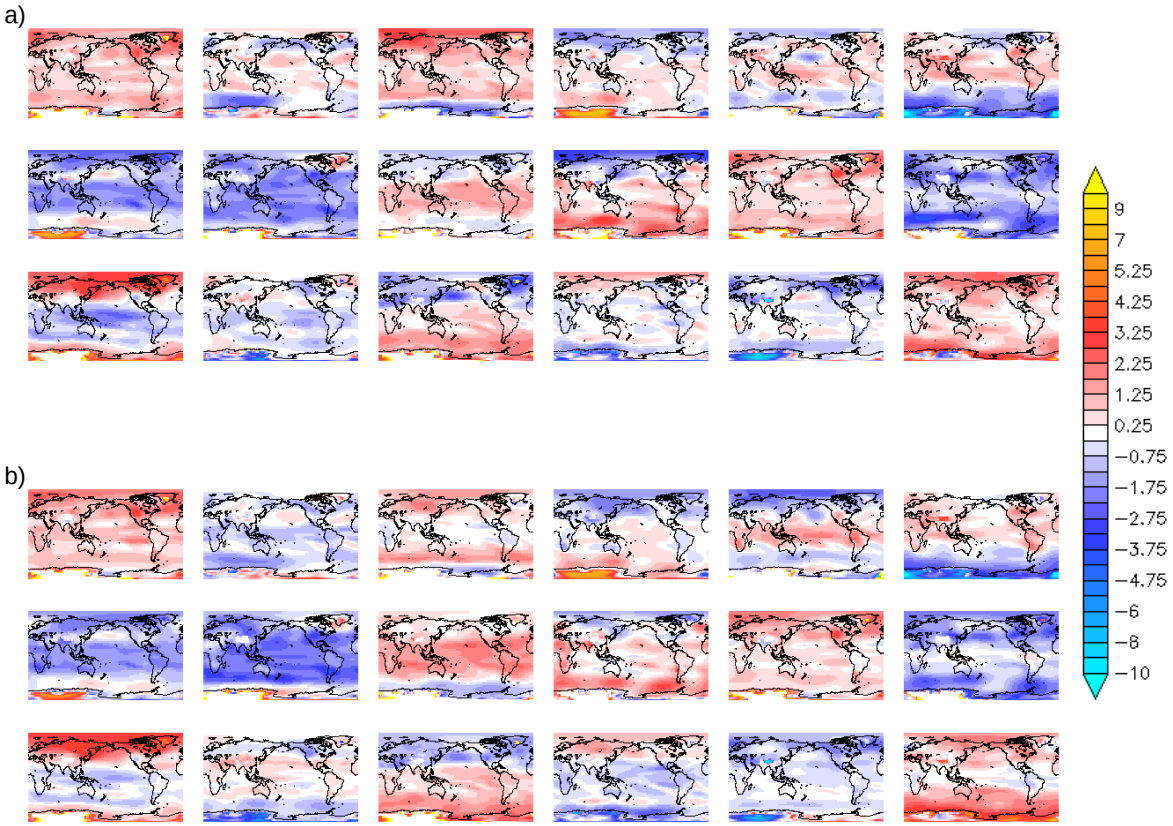

Fig. S6. 700 hPa air temperature error pattern (°C) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

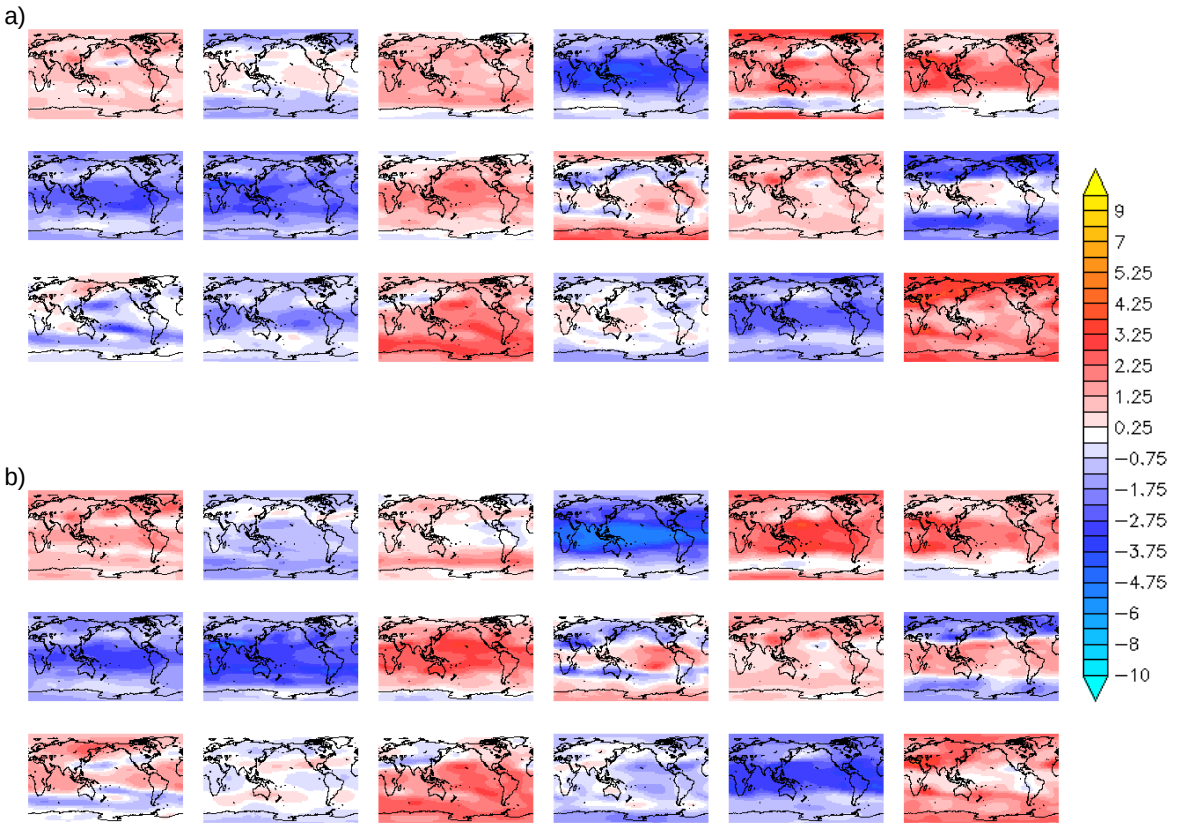

Fig. S7. 300 hPa air temperature error pattern (°C) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

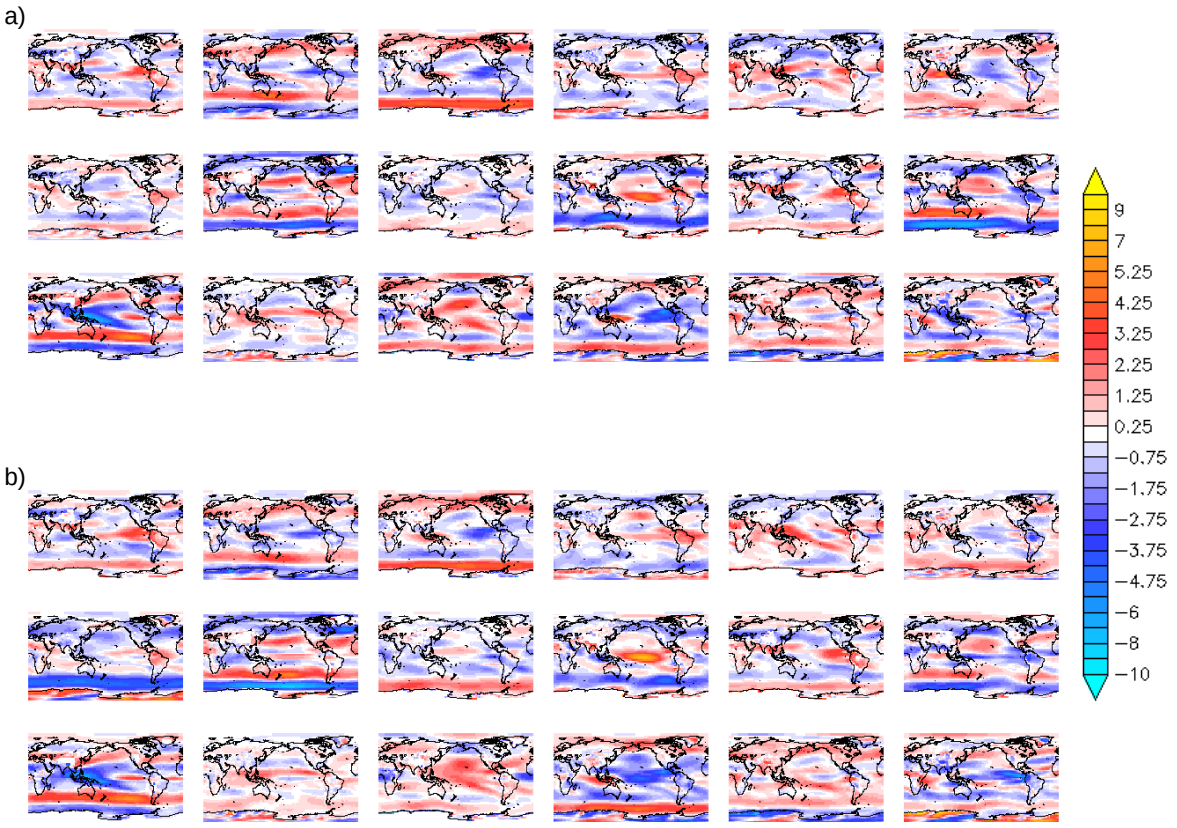

Fig. S8. 850 hPa zonal wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

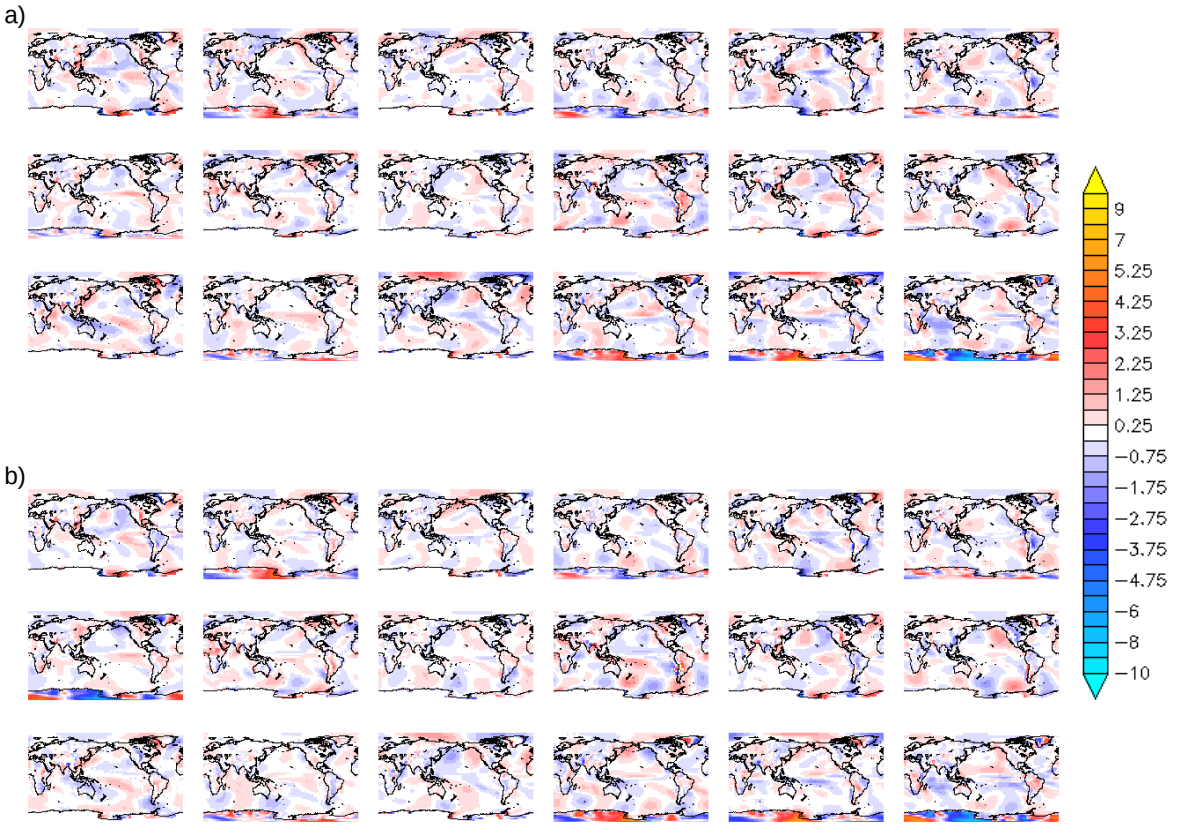

Fig. S9. 850 hPa meridional wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

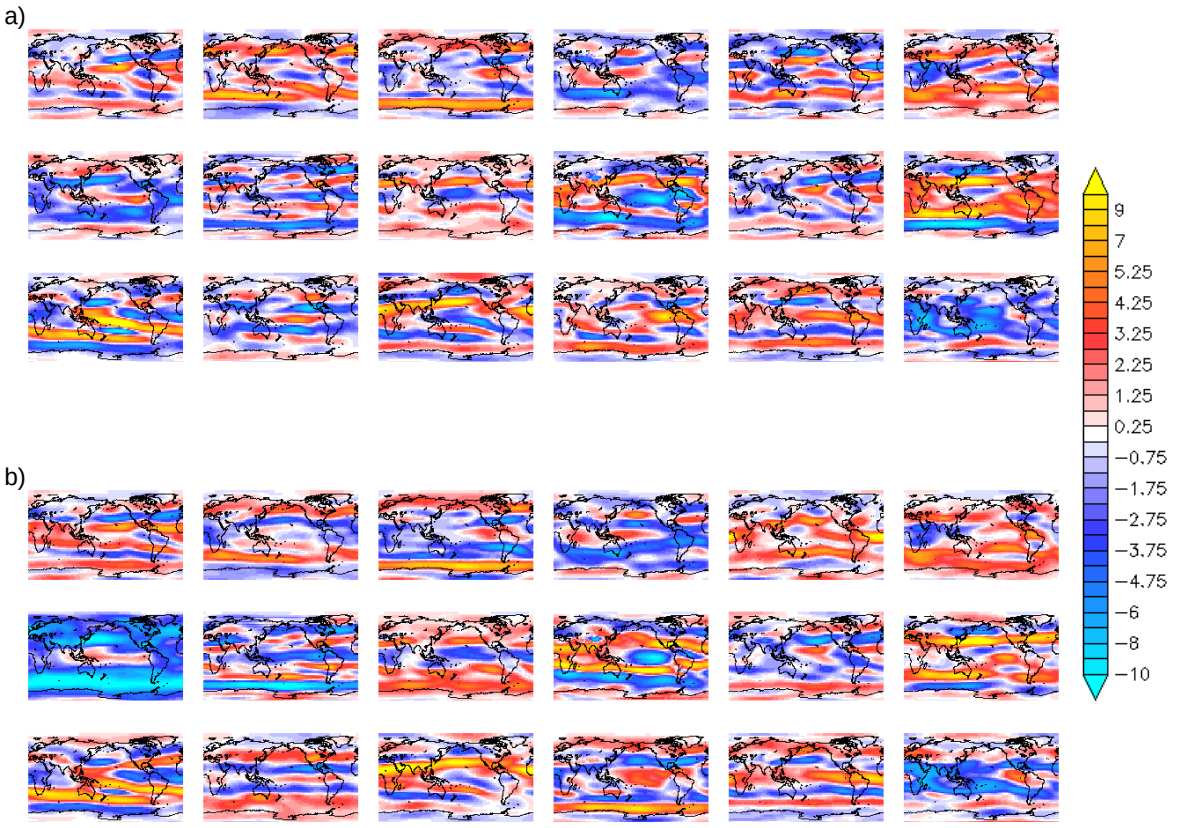

Fig. S10. 200 hPa zonal wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

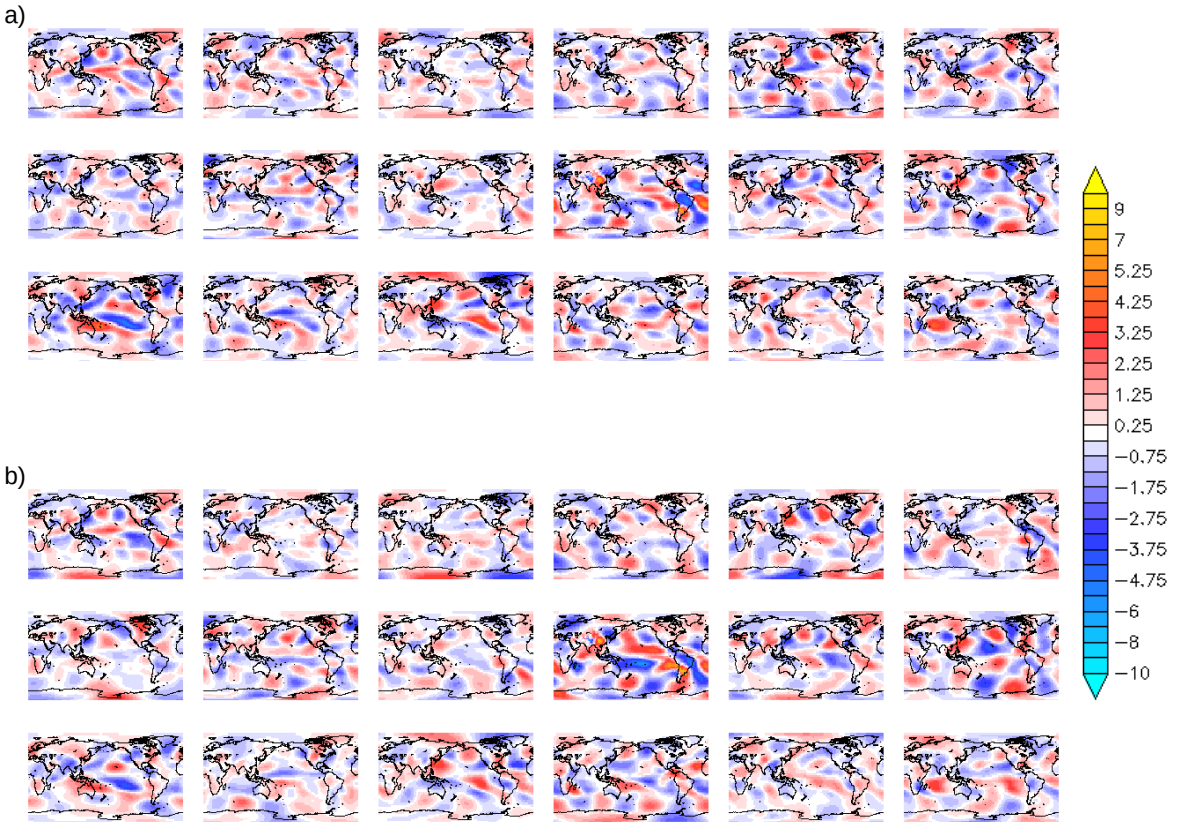

Fig. S11. 200 hPa meridional wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

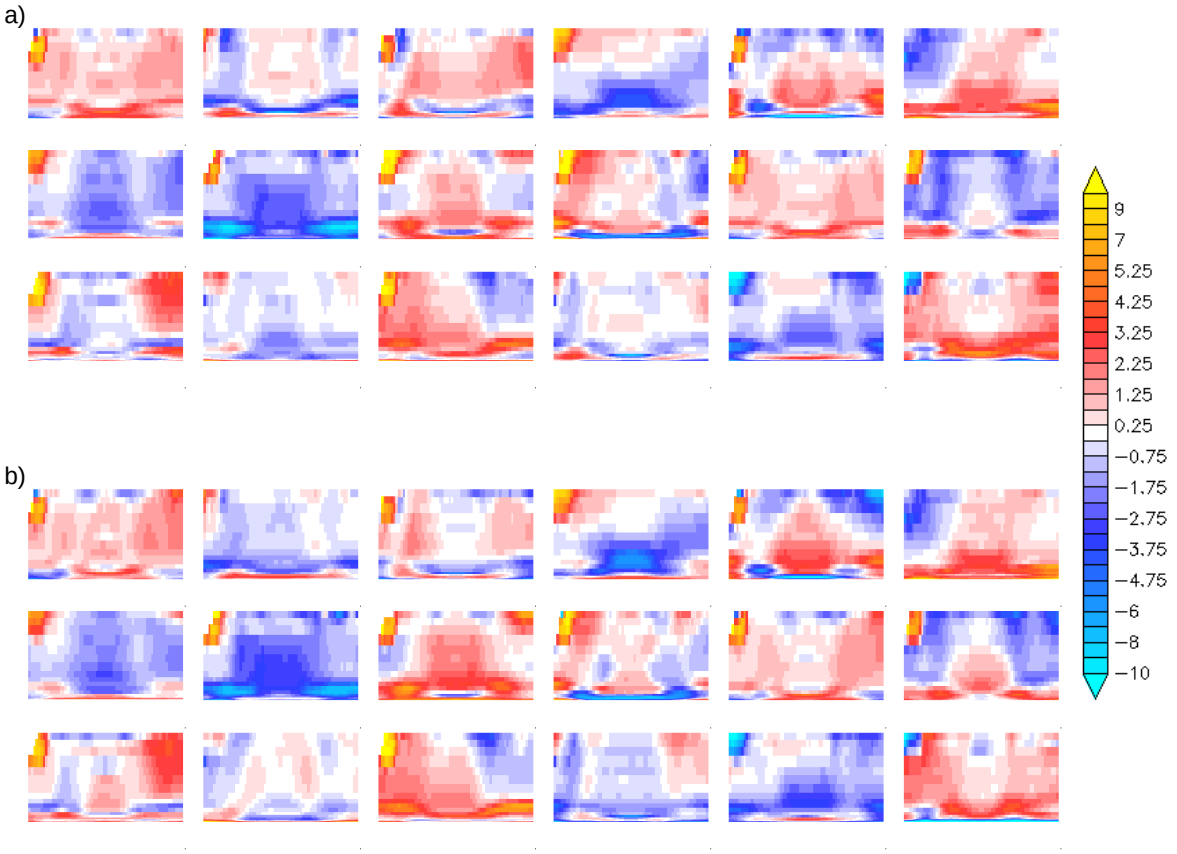

Fig. S12. Zonal-mean atmospheric temperature error patterns (°C) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

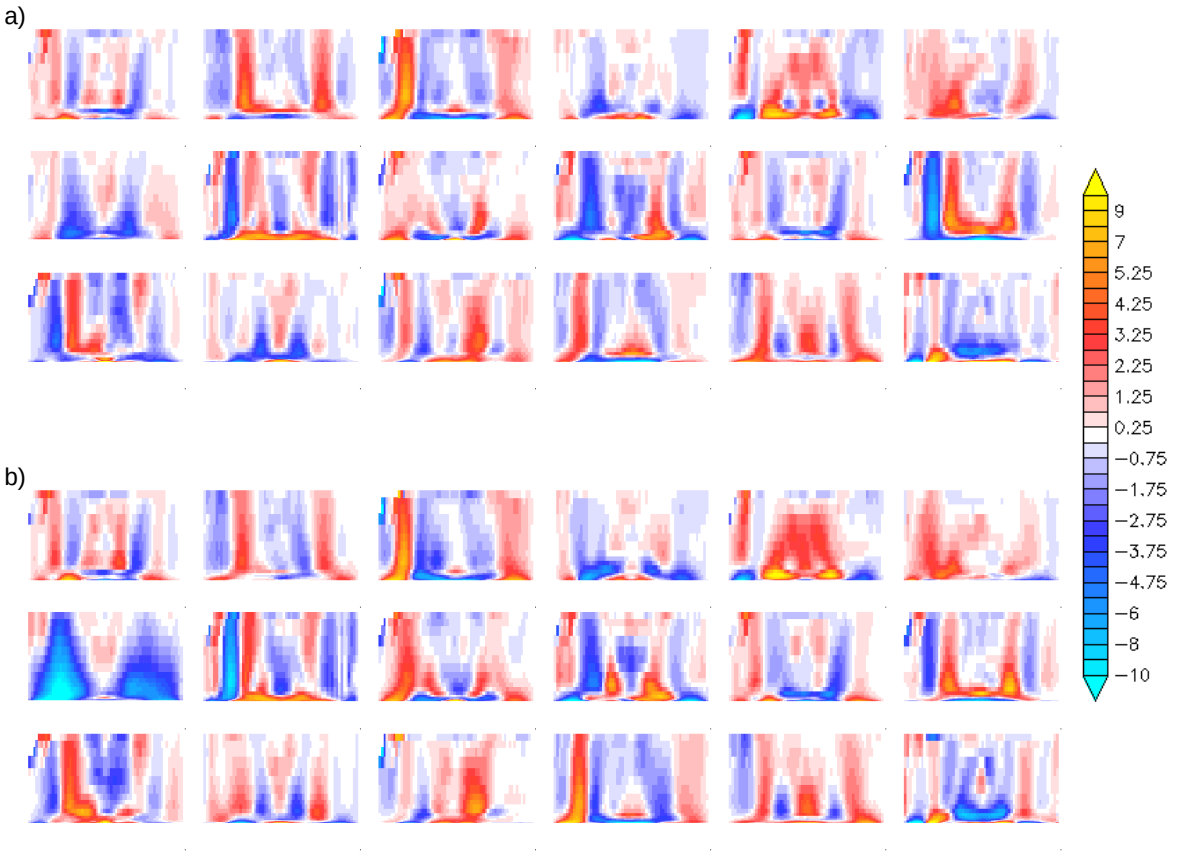

Fig. S13. Zonal mean zonal wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).

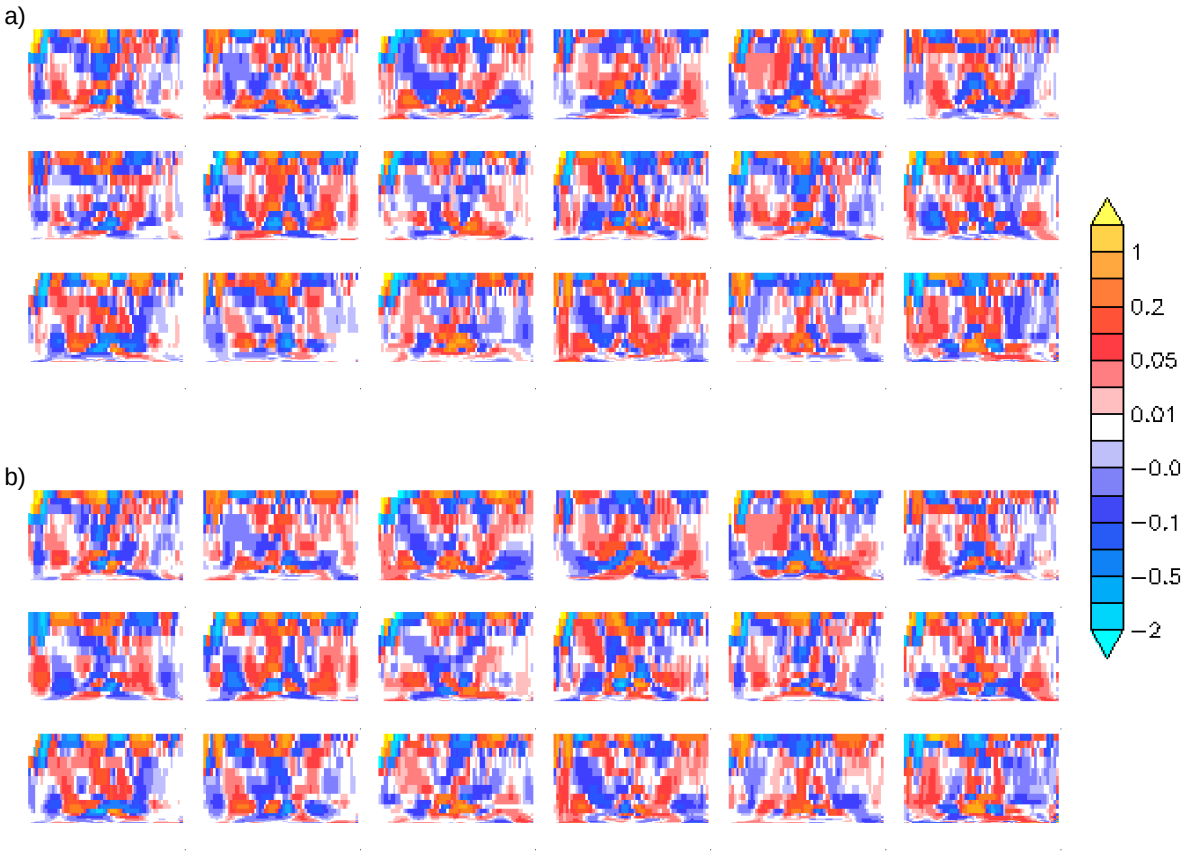

Fig. S14. Zonal mean meridional wind error patterns (ms^{-1}) with respect to the ensemble mean for the individual models. a) piControl; b) abrupt4xCO_2. The color scale is the same for all models and both experiments. Models are ordered from left to right and from top to bottom (model #1 at top left, model #6 at top right, model #18 at bottom right; model numbers as in Figure 1).