

1 Supplementary information for: Human influence
2 on recent trends in extratropical low-level wind
3 speed

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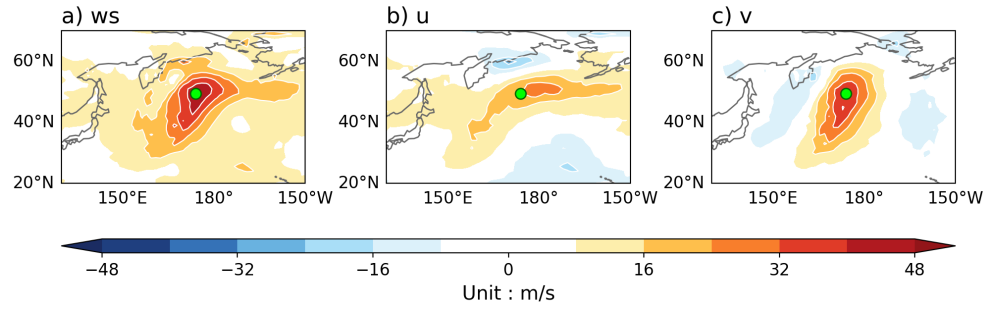


Figure S1 Example of the low-level (850 hPa) (a) extreme wind speed and the associated (b) zonal and (c) meridional wind over the North Pacific. The example is chosen by the maximum daily mean wind speed over the North Pacific in the analysis period (1980-2020). The lime dot depicts the location of the maximum wind speed.

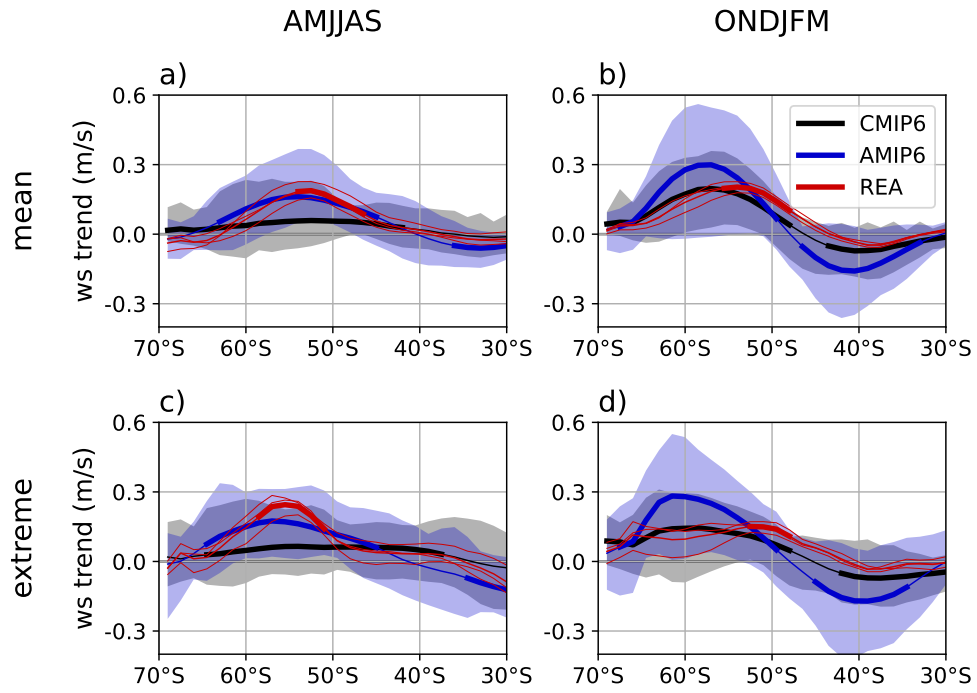


Figure S2 850 hPa mean and extreme wind speed trends in the SH midlatitudes in REA, CMIP6, and AMIP6 in both seasons. Significant ($p\text{-value} < 0.05$) multi-reanalyses or multi-model mean trends are thickened. Shading denotes the whole range of the model ensemble spread.

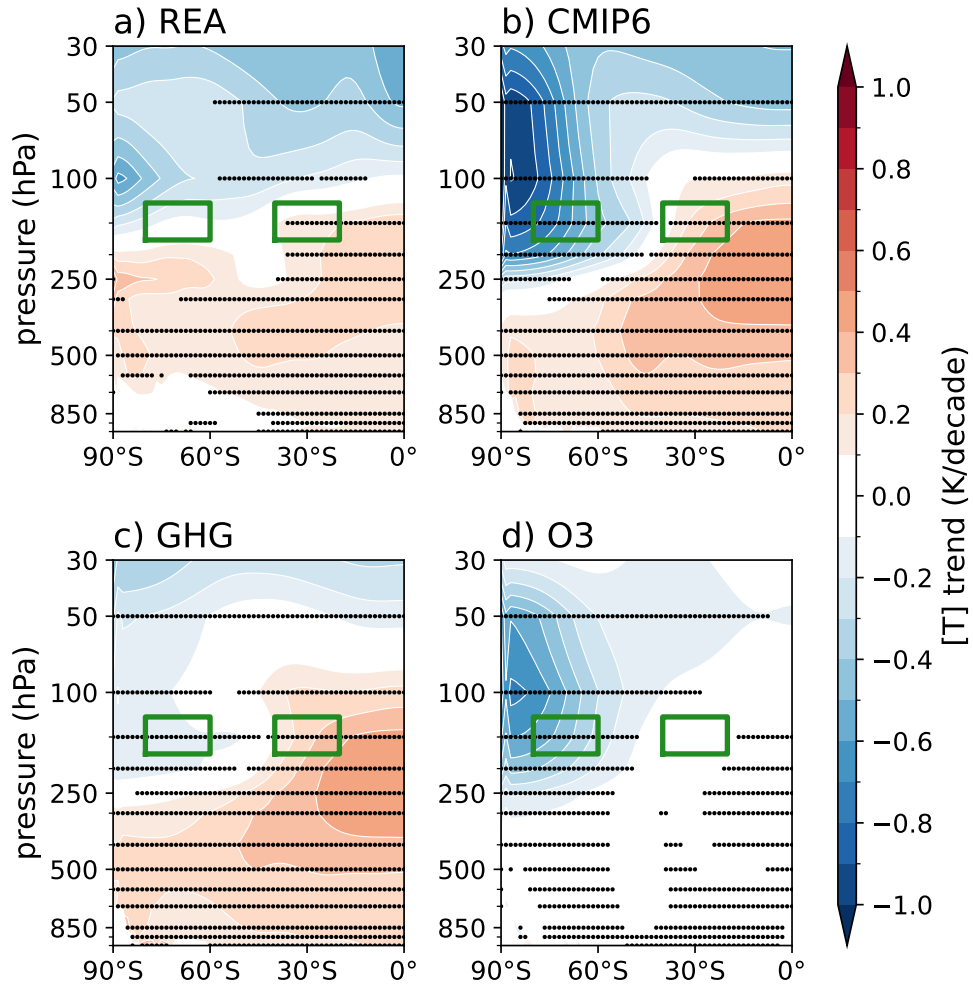


Figure S3 Vertical and latitudinal structure of zonal mean air temperature trends (1980-2019) in extended austral summer (ONDJFM) in (a) REA, (b) CMIP6, (c) GHG, and (d) O3 single forcing experiments. Significant (p-value < 0.05) multi-reanalyses or multi-model mean trends are stippled. Green boxes indicate the level and latitudes for the meridional temperature gradient quantified in [Figure S4](#)

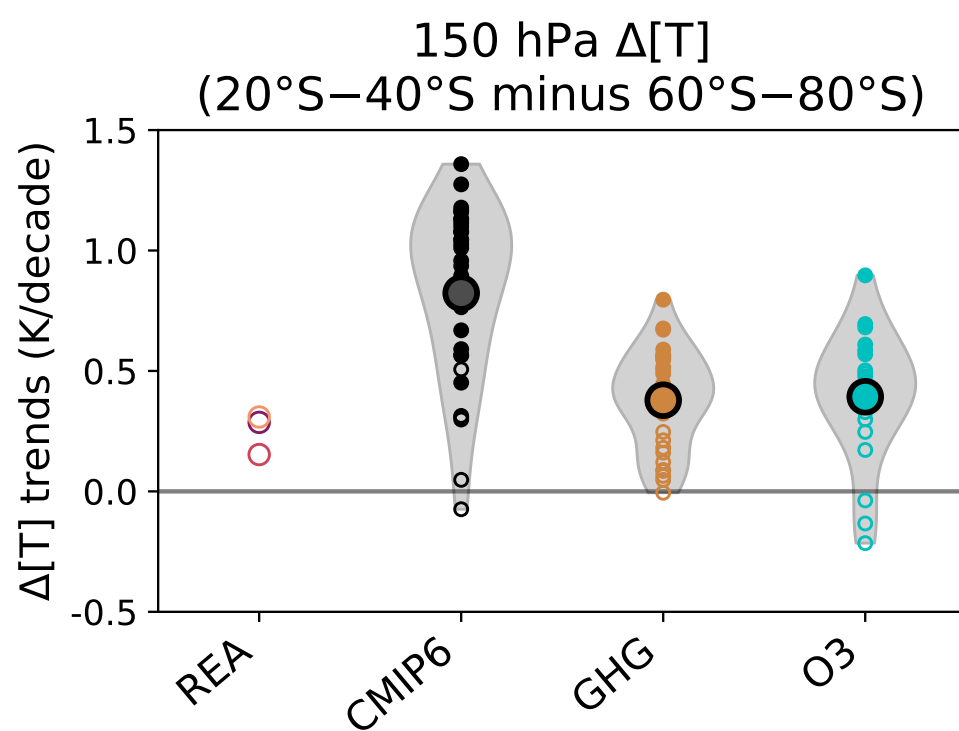


Figure S4 Similar to [Figure 2](#), but for trends in 150 hPa meridional temperature difference (20°S–40°S minus 60°S–80°S) in REA, CMIP6, GHG, and O3 single forcing experiments during ONDJFM.

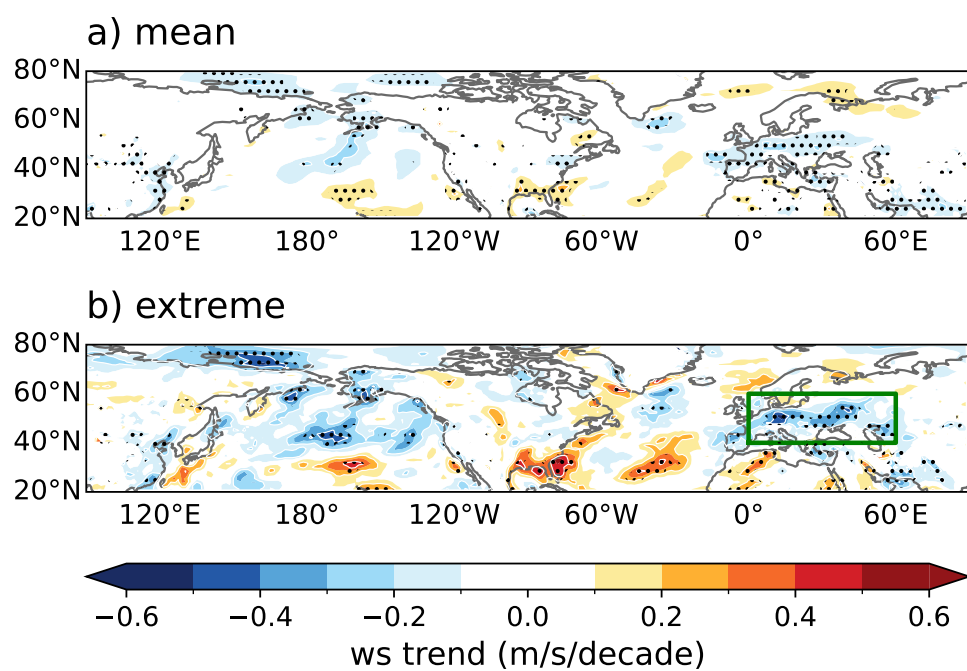


Figure S5 Trends map of 850 hPa (a) mean and (b) extreme winds in AMJJAS in the NH.

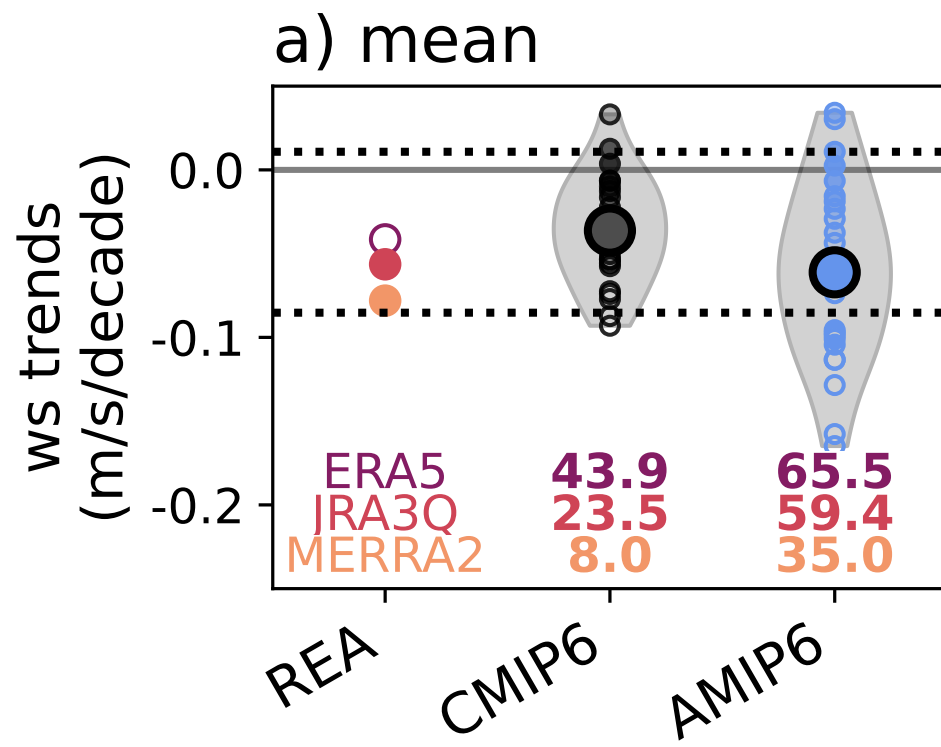


Figure S6 Similar to Figure 5c, but for mean winds over Europe.

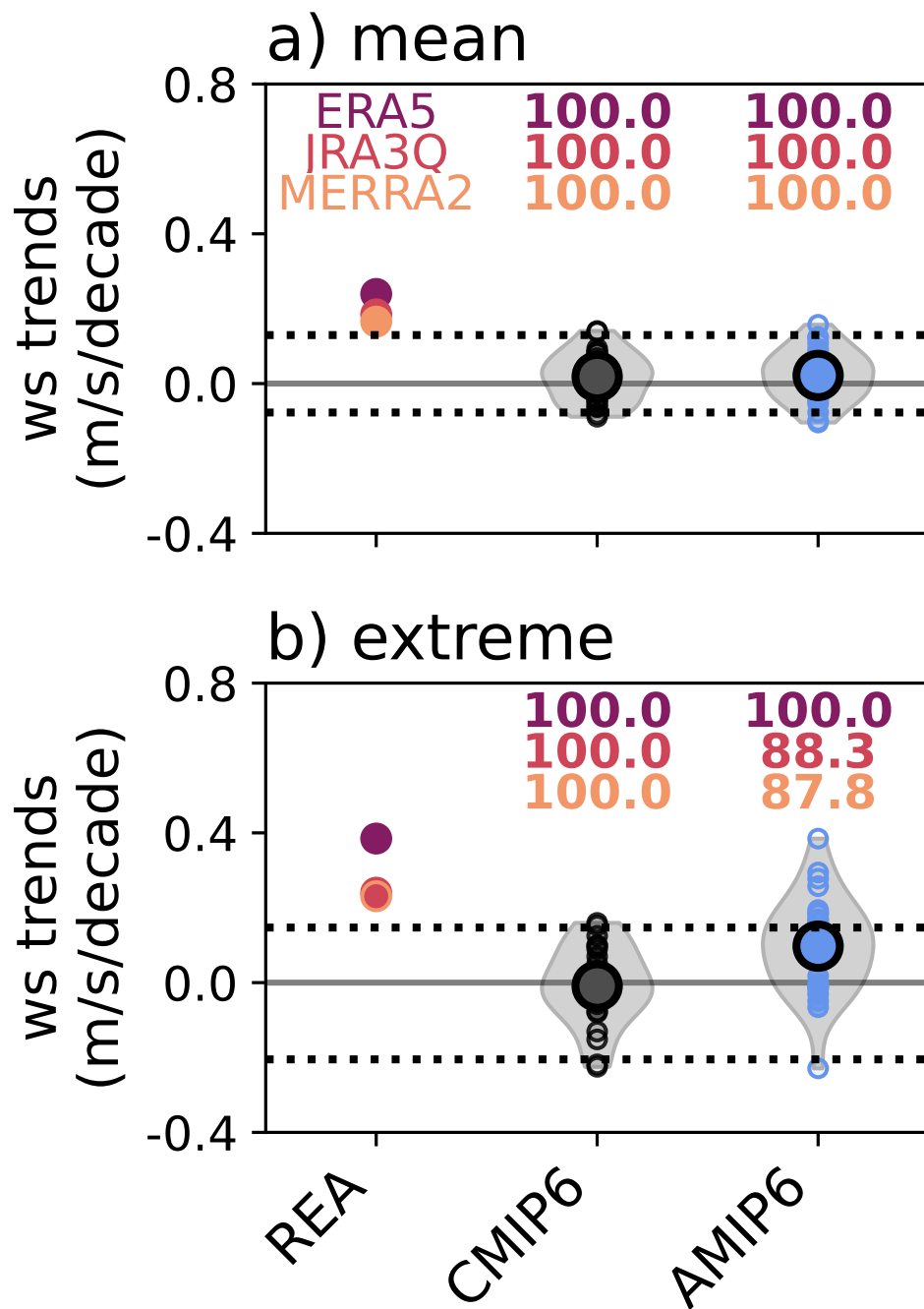


Figure S7 Similar to [Figure 7c](#), but for 850 hPa (a) mean and (b) extreme winds over the region with positive trends in the midlatitudinal North Pacific ([45°N-60°N, 155°E-175°W]) in ONDJFM.