# Zonal mean wind stress forcing comparison

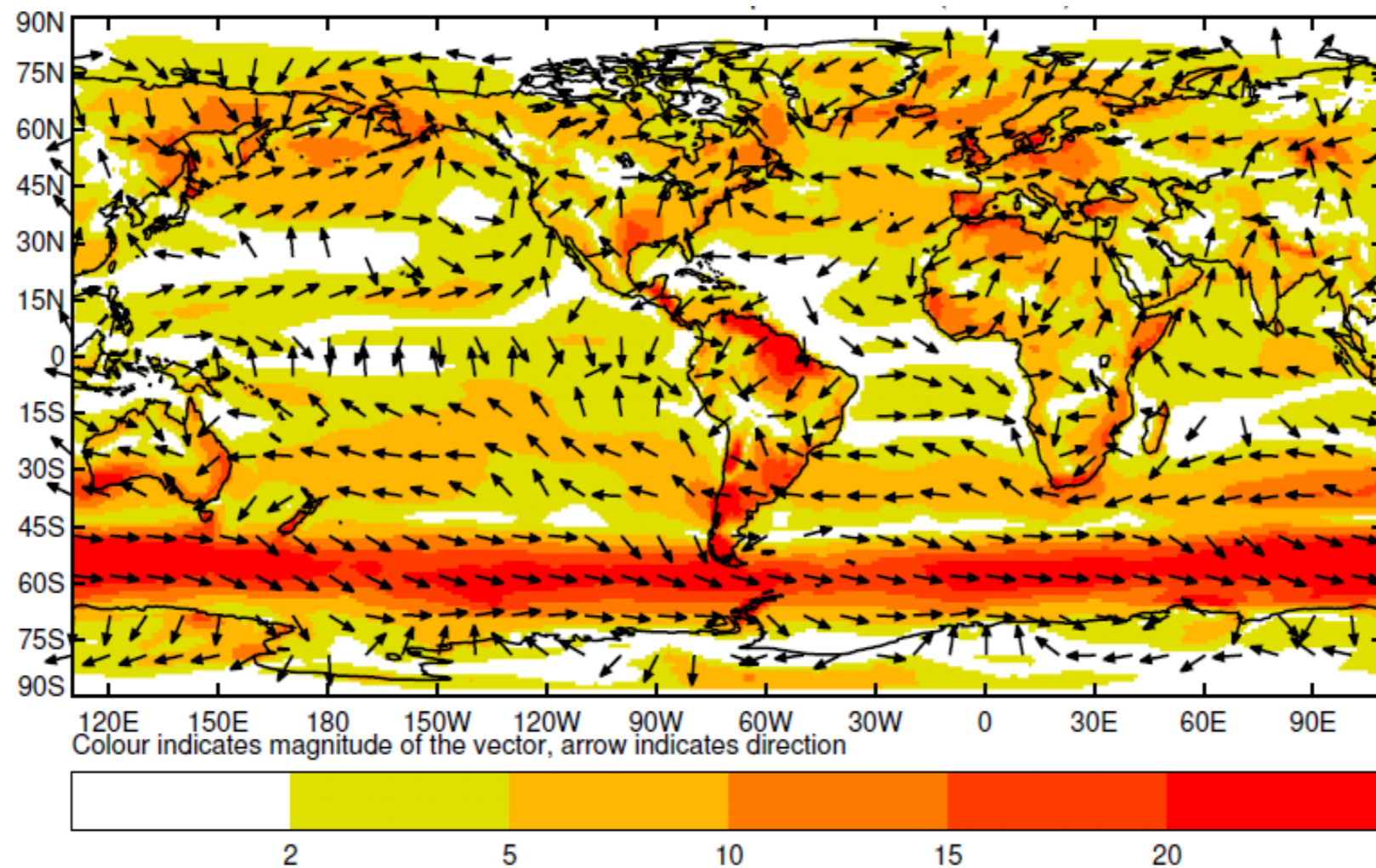These slides show spatial patterns of the following anomalies:
- Sea surface temperature
- Column-integrate heat anomaly
- Sea surface height

  as simulated by ESM2M when the FAFMIP wind stress perturbation is applied during 95 years compared to when the zonal mean of this same perturbation is applied for the same duration  (anomalies are relative to the pre-industrial control).
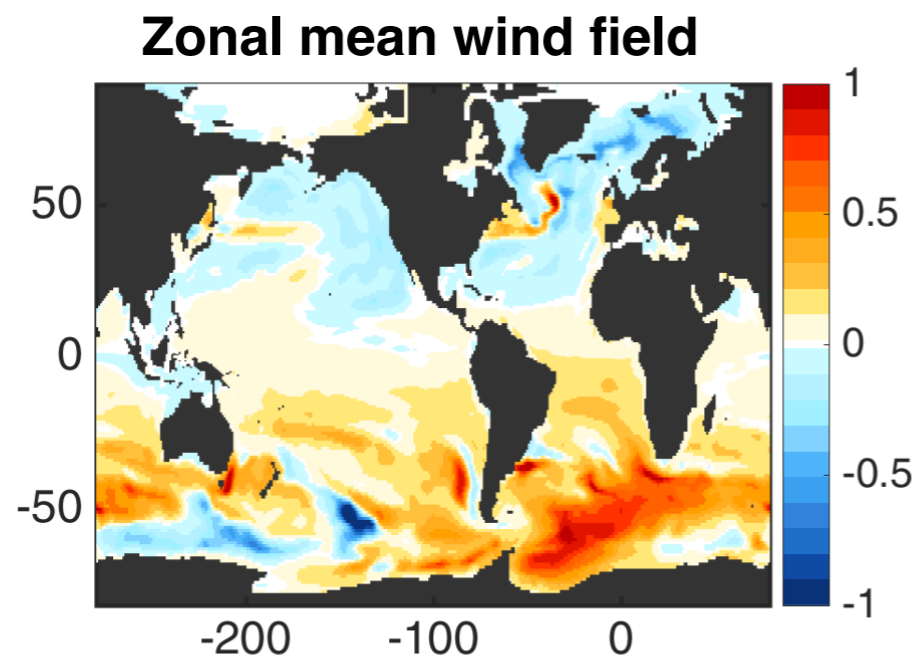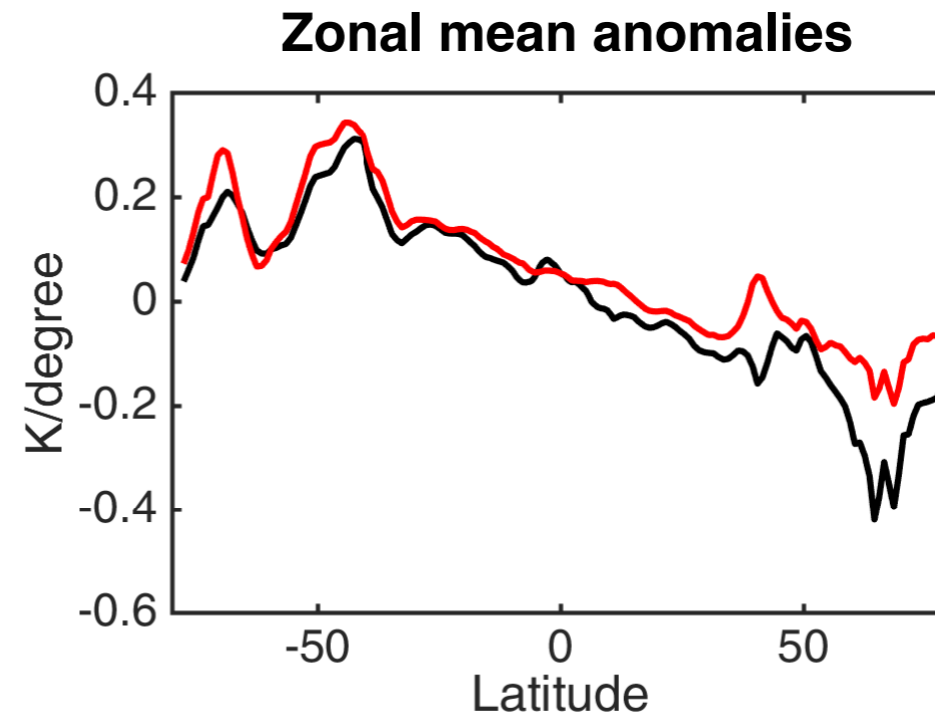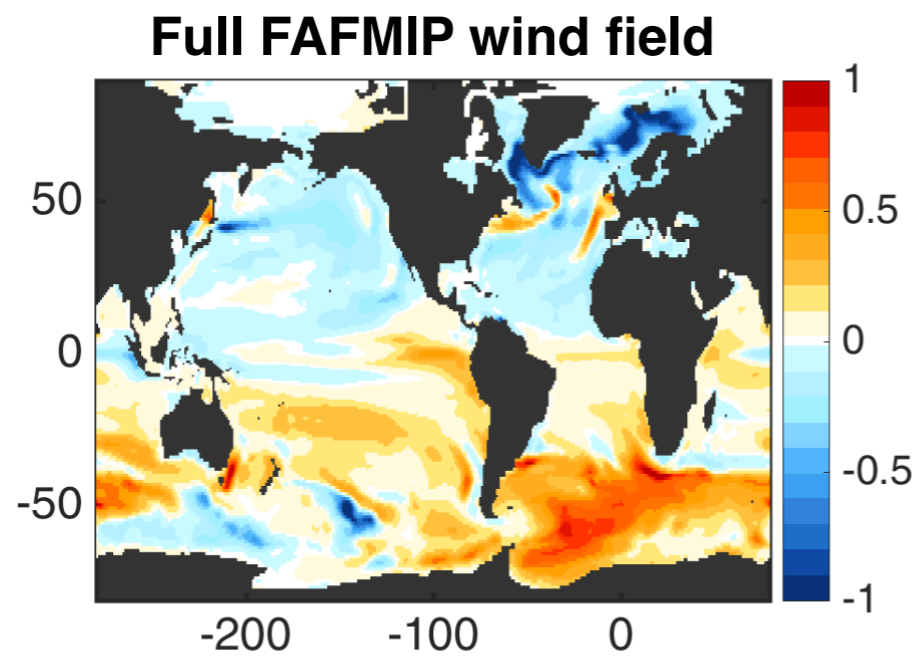
# SOMIP

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The FAFMIP surface momentum flux perturbation ($10^{-3}$ Pa)



Colour indicates magnitude of the vector, arrow indicates direction

Gregory, J. M., Bouttes, N., Griffies, S. M., Haak, H., Hurlin, W. J., Jungclaus, J., Kelley, M., Lee, W. G., Marshall, J., Romanou, A., Saenko, O. A., Stammer, D., and Winton, M.: The Flux-Anomaly-Forced Model Intercomparison Project (FAFMIP) contribution to CMIP6: investigation of sea-level and ocean climate change in response to CO2 forcing, Geosci. Model Dev., 9, 3993-4017, https://doi.org/10.5194/gmd-9-3993-2016, 2016.

# SOMIP

## Sea surface temperature (°C):



**Full FAFMIP wind field**

**Zonal mean anomalies**

**Zonal mean wind field**

Full FAFMIP wind field
Zonal mean wind field

# Column-integrated heat content (J/m²):

## Sea surface height (m):



**Full FAFMIP wind field**

**Zonal mean anomalies**

**Zonal mean wind field**

Full FAFMIP wind field

Zonal mean wind field