

Supplement of Atmos. Chem. Phys., 20, 5249–5268, 2020  
<https://doi.org/10.5194/acp-20-5249-2020-supplement>  
© Author(s) 2020. This work is distributed under  
the Creative Commons Attribution 4.0 License.



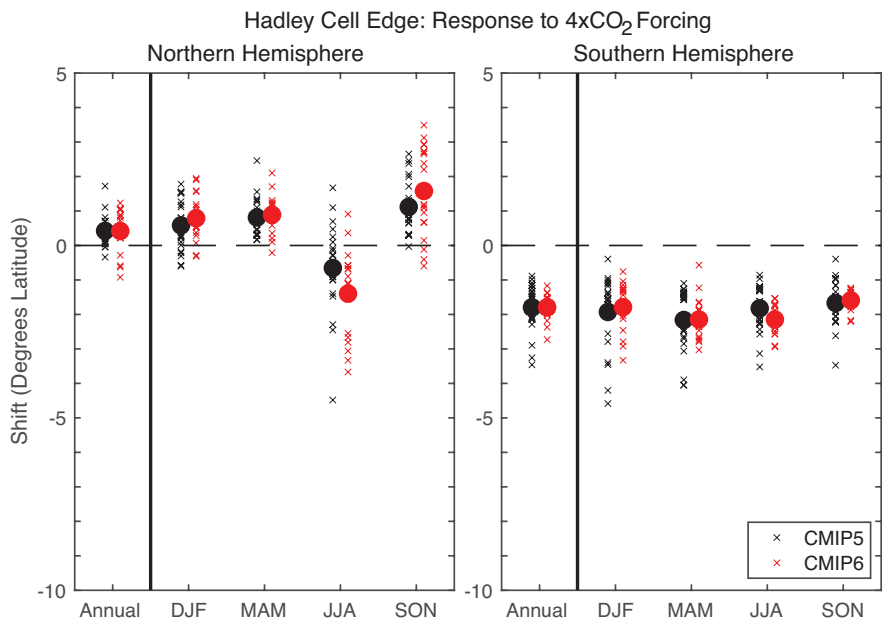
*Supplement of*

## **Hadley cell expansion in CMIP6 models**

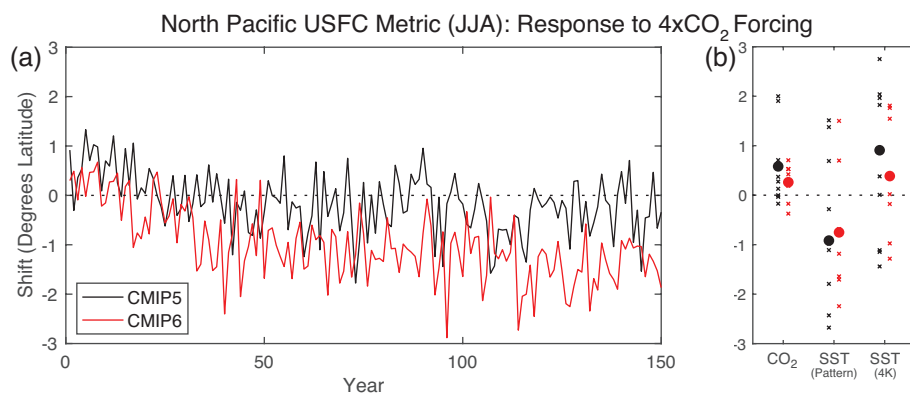
**Kevin M. Grise and Sean M. Davis**

*Correspondence to:* Kevin M. Grise ([kmg3r@virginia.edu](mailto:kmg3r@virginia.edu))

The copyright of individual parts of the supplement might differ from the CC BY 4.0 License.



**Figure S1: As in Fig. 1, but for the USFC metric.**



**Figure S2:** As in panels b and c of Fig. 2, but for the USFC metric calculated over the North Pacific ( $135^{\circ}E-125^{\circ}W$ ) sector.

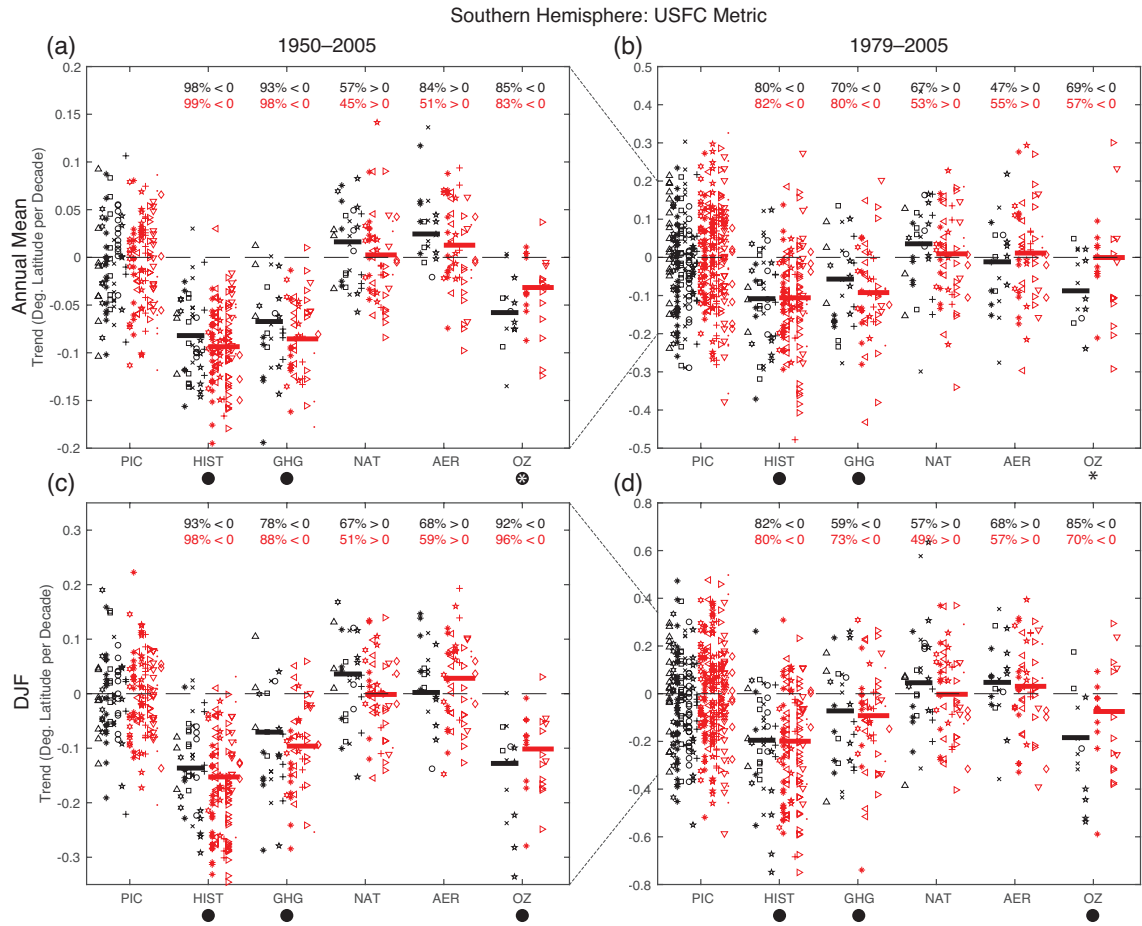
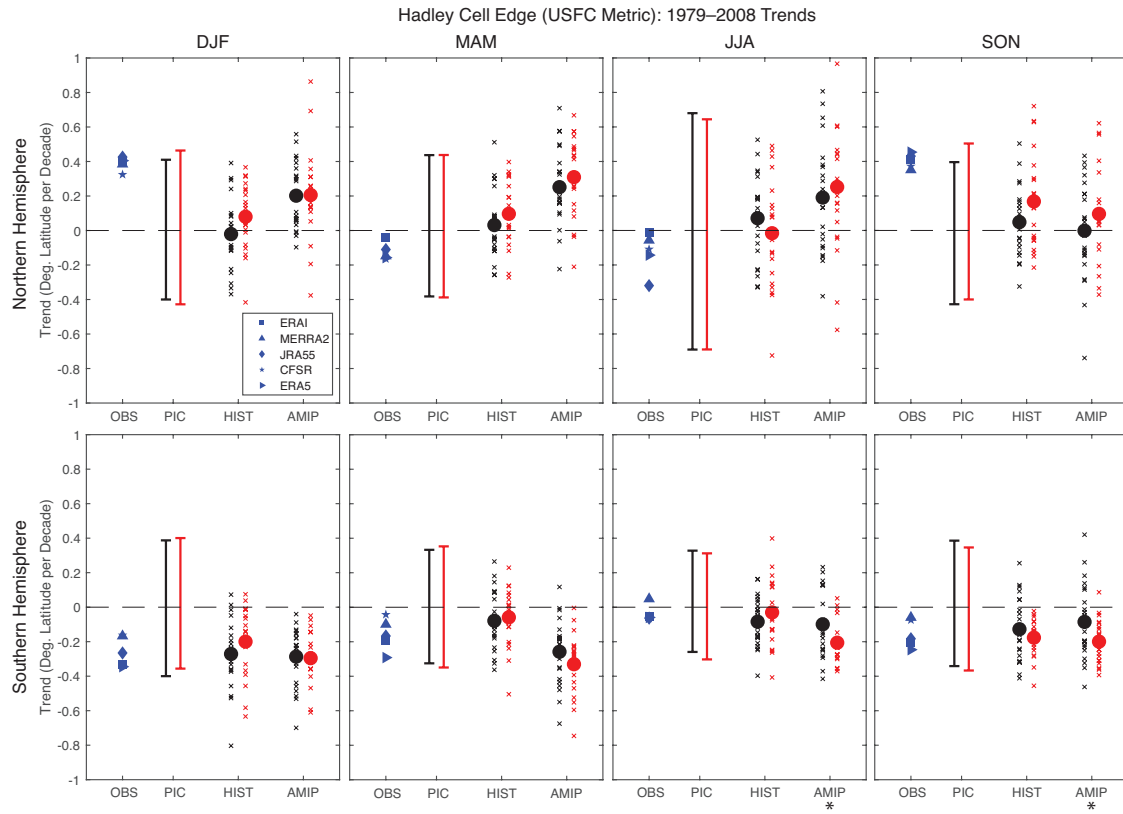


Figure S3: As in Fig. 7, but for the trends in the Southern Hemisphere Hadley cell edge latitude measured by the USFC metric.



**Figure S4:** As in Fig. 4, but for the seasonal-mean trends in the (top row) Northern Hemisphere and (bottom row) Southern Hemisphere Hadley cell edge latitudes measured by the USFC metric.



<b>Model</b>	<b>historical</b>	<b>hist-GHG</b>	<b>hist-aer</b>	<b>hist-nat</b>	<b>hist-ozone</b>
ACCESS1.3	3	3	0	3	0
BCC-CSM1.1	3	1	0	1	0
CanESM2	5	5	5	5	0
CCSM4	8	3	3	4	2
CSIRO Mk3.6.0	10	5	5	5	5
FGOALS-g2	5	1	1	3	1
GISS-E2-R	6	5	5	5	5
HadGEM2-ES	4	4	0	4	0

**Table S1: CMIP5 historical single forcing runs used in this study. Numbers indicate the number of ensemble members used for each single forcing scenario.**

<b>Model</b>	<b>historical</b>	<b>hist-GHG</b>	<b>hist-aer</b>	<b>hist-nat</b>	<b>hist-stratO3</b>
BCC-CSM2-MR	3	3	3	3	0
CanESM5	25	10	10	10	10
CNRM-CM6-1	21	10	10	10	0
GISS-E2-1-G	10	5	5	5	0
HadGEM3-GC31-LL	4	4	4	4	0
IPSL-CM6A-LR	32	10	10	10	10
MIROC6	10	3	3	3	3
MRI-ESM2-0	5	3	3	3	0
NorESM2-LM	3	1	3	3	0

**Table S2: CMIP6 historical single forcing runs used in this study. Numbers indicate the number of ensemble members used for each single forcing scenario.**