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Observed and simulated precipitation responses in wet and dry regions 1850–2100

Article

Supplemental Material

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Figure captions

Fig. S1. As Figure 2, with more lines from UEA, GISS and CICS/ESSIC data sets.

Fig. S2. Spatial structure of precipitation anomaly trend (using fixed P_I) from (a) GPCP, (b) AMIP5, (c) CMIP historical and (d) RCP 4.5 data sets. The data periods are from 1988-2008 for GPCP and AMIP5 data sets, 1979-2005 for CMIP5 historical data and 2006-2055 for RCP 4.5 data set. Please note the non-linear colour bars.

Fig. S3. Similar to the left column of Figure 4, but for the wettest and driest months in each year at each grid point.

TABLE S1. Correlation coefficients between different data sets over period 1979-2008. Statistically significant coefficients are in bold. Top triangle is for wet tropical land and lower triangle is for dry tropical land.

	GPCP	GPCC	UEA	CICS/ESSIC	GISS	MEI	AMIP ensemble mean
AMIP ensemble mean	**0.30**	**0.37**	**0.34**	**0.36**	**0.30**	**-0.29**	
MEI	**-0.57**	**-0.63**	**-0.57**	**-0.49**	**-0.30**		-0.18
GISS	**0.22**	**0.26**	**0.23**	**0.27**		-0.03	0.17
CICS/ESSIC	**0.76**	**0.77**	0.75		0.04	-0.17	0.12
UEA	**0.82**	**0.85**		**0.73**	0.07	**-0.36**	0.17
GPCC	**0.93**		**0.90**	**0.74**	0.13	**-0.39**	**0.30**
GPCP		**0.93**	**0.84**	**0.78**	0.12	-0.16	**0.25**

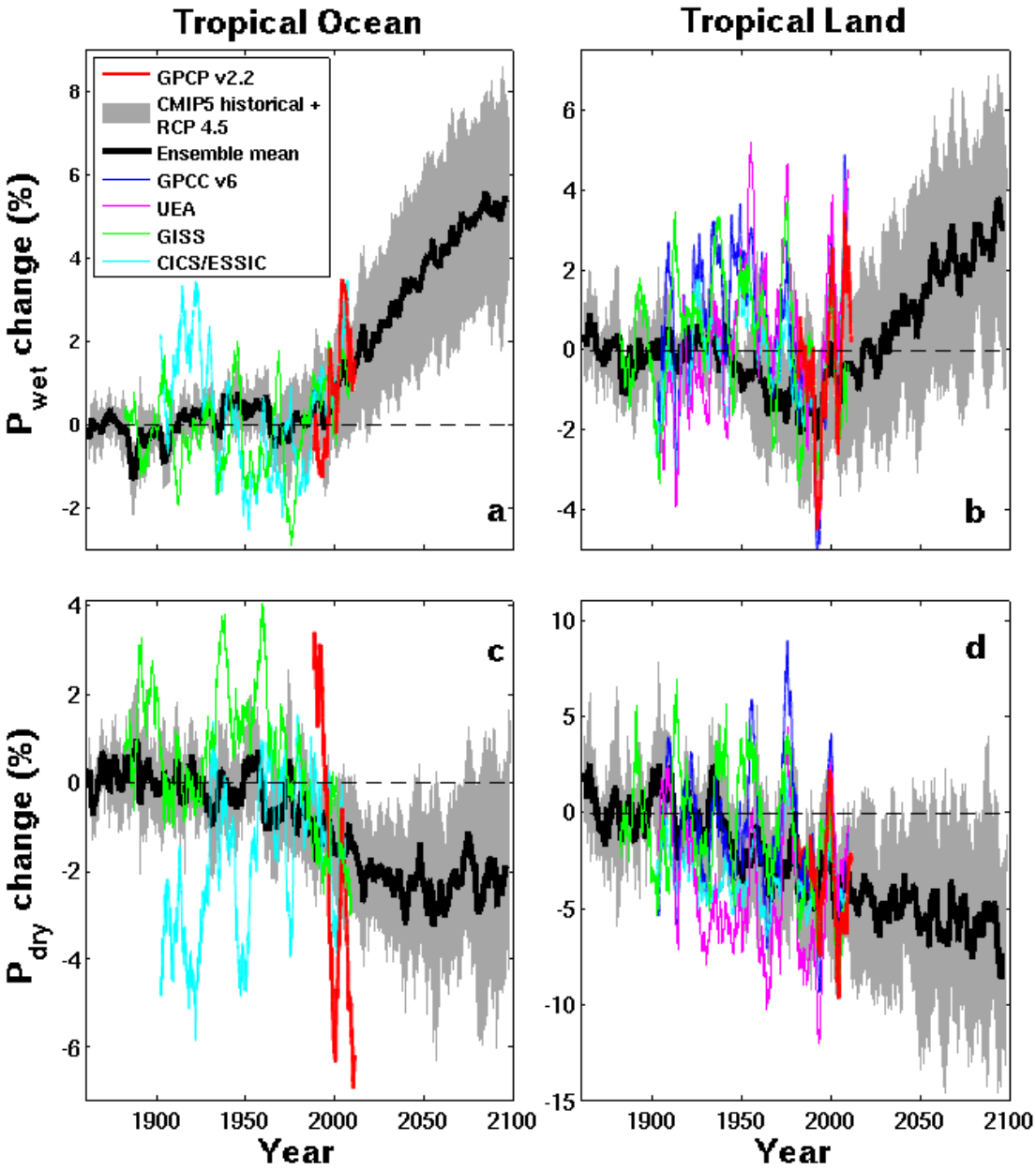
Tropical Ocean
Tropical Land
GPCP v2.2
CMIP5 historical + RCP 4.5
Ensemble mean
GPCC v6
UEA
GISS
CICS/ESSIC
P wet change (%)
P dry change (%)
a
b
c
d
1900
1950
2000
2050
2100
Year

Fig. S1

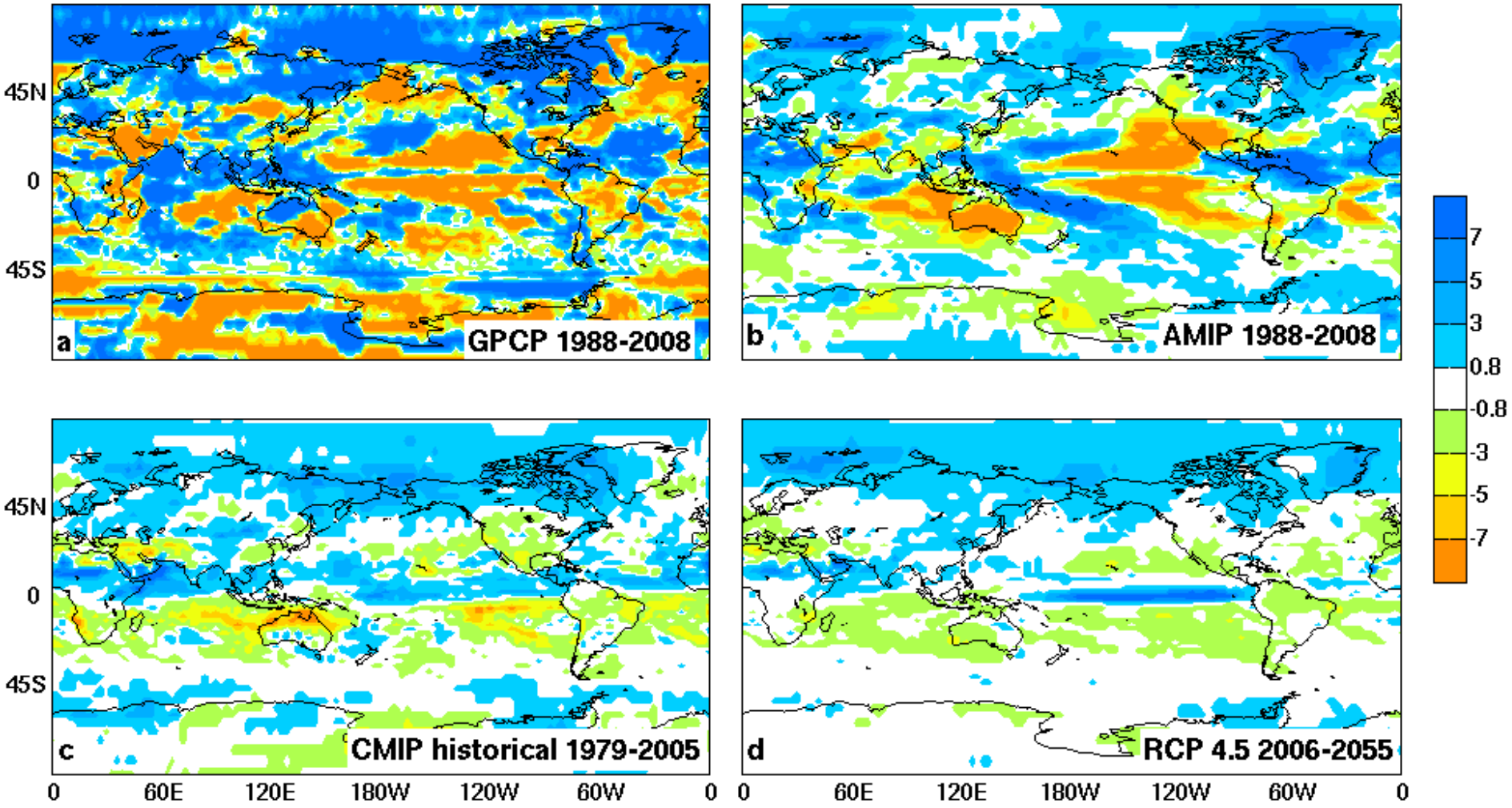
45N
0
45S
a
GPCP 1988-2008
b
AMIP 1988-2008
c
CMIP historical 1979-2005
d
RCP 4.5 2006-2055
0
60E
120E
180W
120W
60W
0
7
5
3
0.8
-0.8
-3
-5
-7

Fig. S2

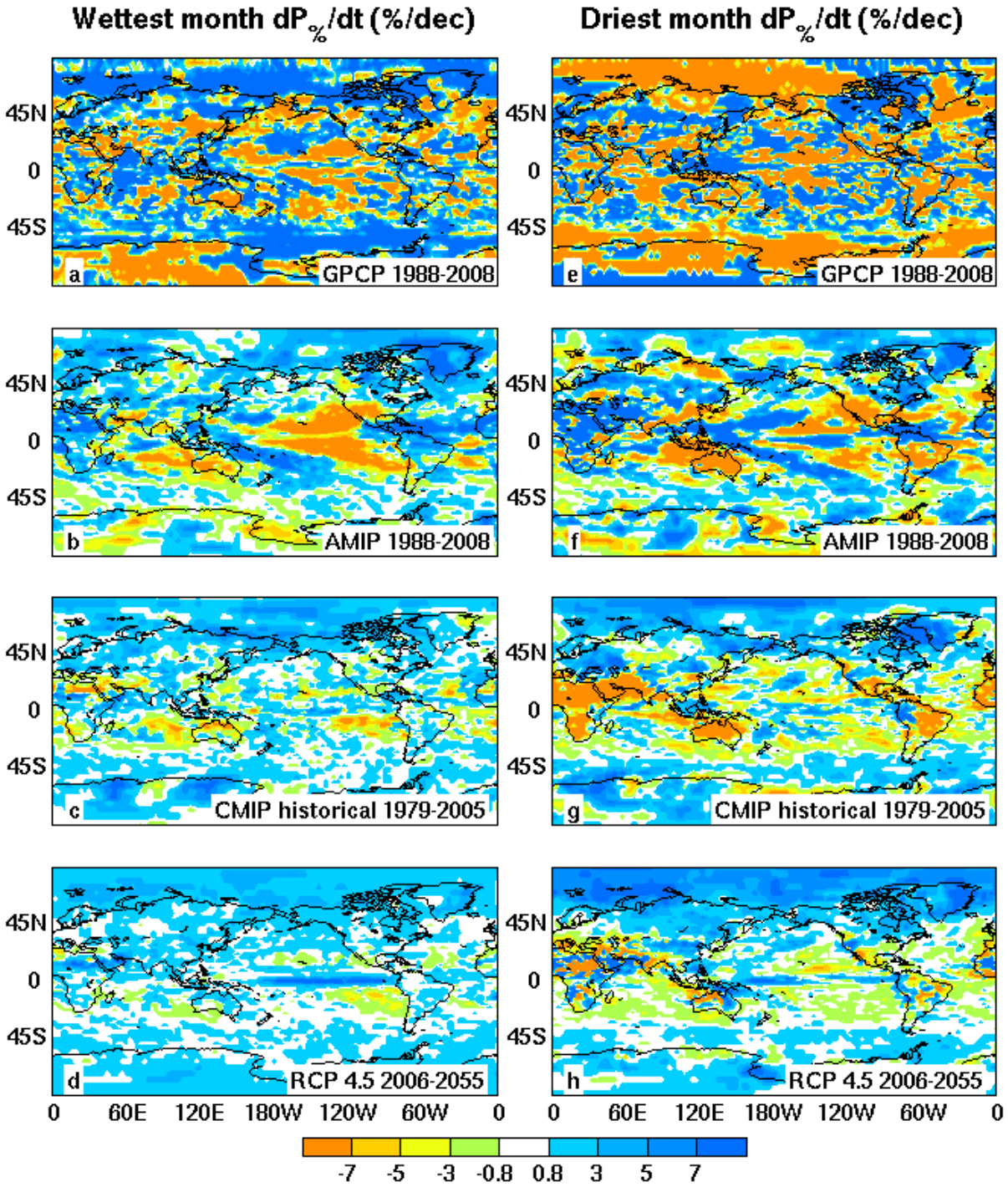
Wettest month dP%/dt (%/dec)
Driest month dP%/dt (%/dec)
45N
0
45S
a GPCP 1988-2008
e GPCP 1988-2008
b AMIP 1988-2008
f AMIP 1988-2008
c CMIP historical 1979-2005
g CMIP historical 1979-2005
d RCP 4.5 2006-2055
h RCP 4.5 2006-2055
0 60E 120E 180W 120W 60W 0
-7 -5 -3 -0.8 0.8 3 5 7

Fig. S3