AGU PUBLICATIONS

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Supporting Information for

Robust asymmetry of the future Arctic polar vortex is driven by tropical Pacific warming

Shinji Matsumura[1], Koji Yamazaki[2] and Takeshi Horinouchi[1]

[1]*Faculty of Environmental Earth Science, Hokkaido University, Kita 10 Nishi 5, Kita-ku, Sapporo, 060-0810, Japan*

[2]*Arctic Research Center, Hokkaido University, Kita 21 Nishi 11, Kita-ku, Sapporo, 001-0021, Japan*

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Introduction

The supporting information includes methods and supplementary results.

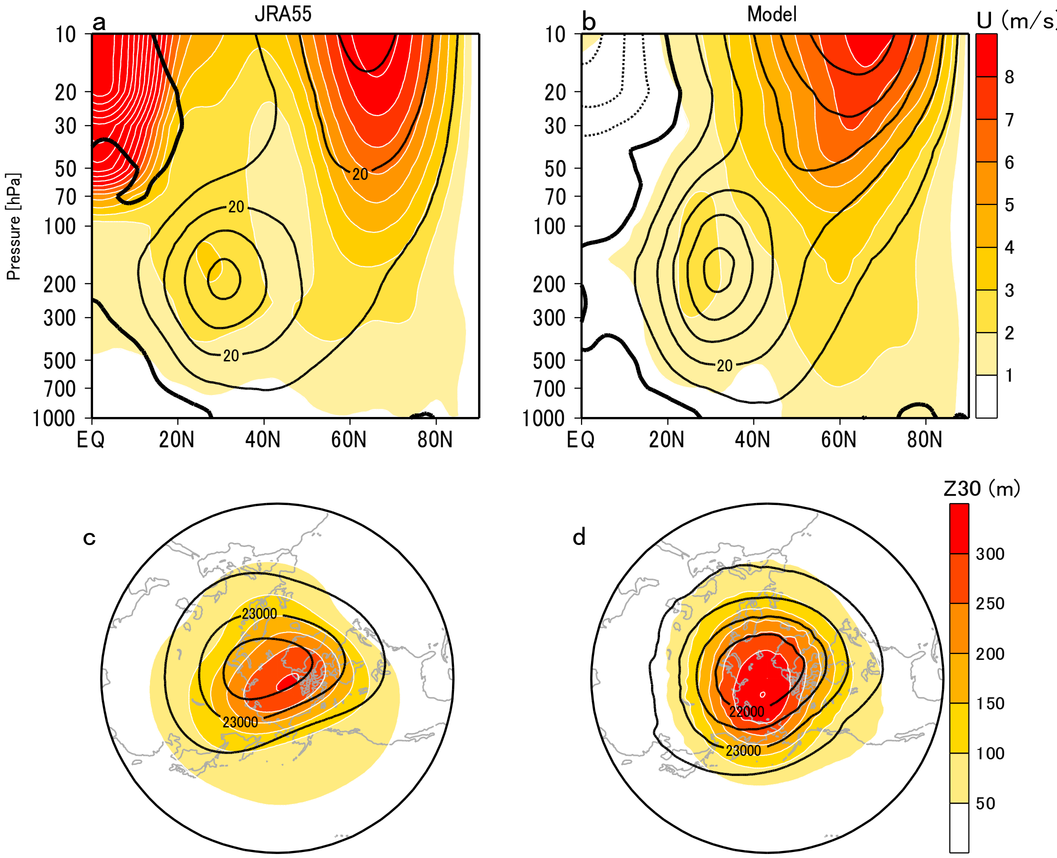


Figure S1. (a) Wintertime interannual variability of zonal-mean zonal wind for 1970–1999 in JRA55 reanalysis. (b) As in (a), but for ensemble variability in HIST experiment. (c) and (d) As in (a) and (b), but for 30hPa-geopotential height. Solid contours denote climatology (contour interval is 10 m s^{-1} in (a) and (b), with the zero contour thicker, and 500 m in (c) and (d)).

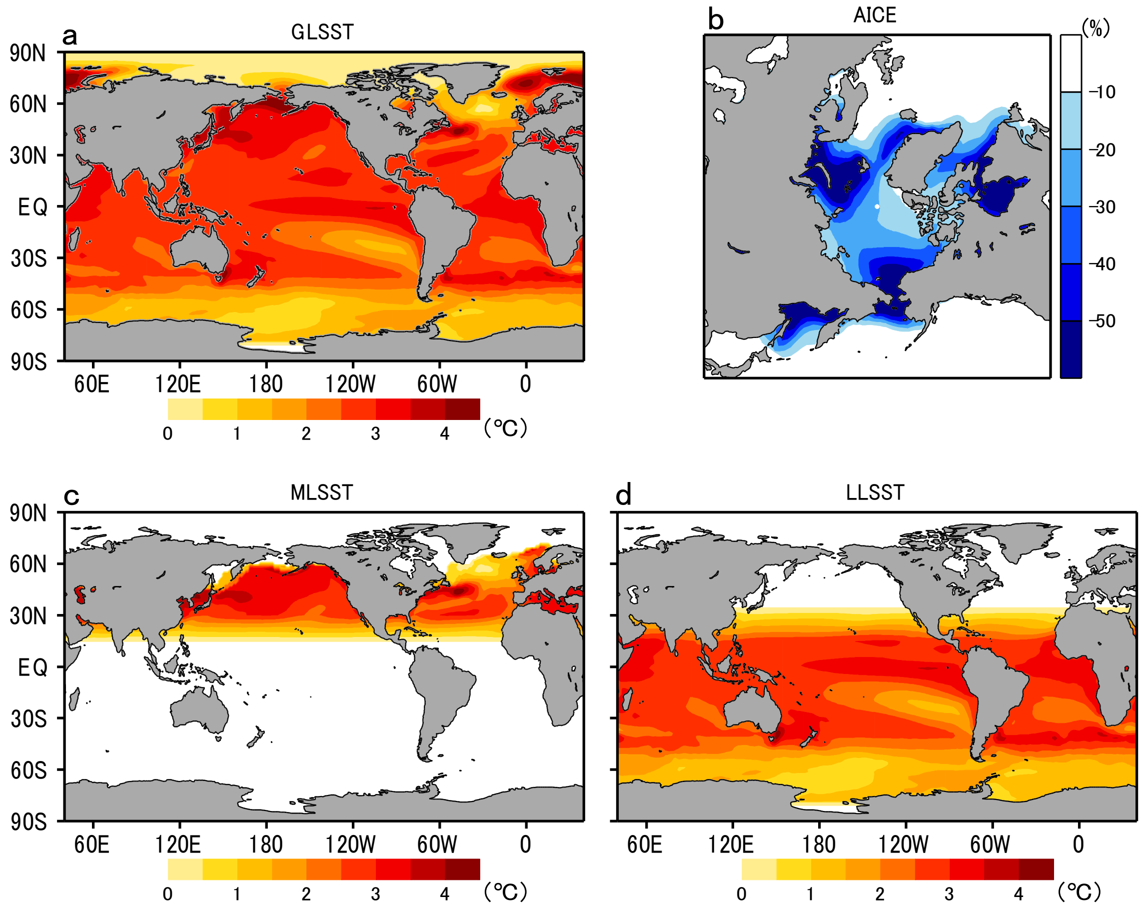
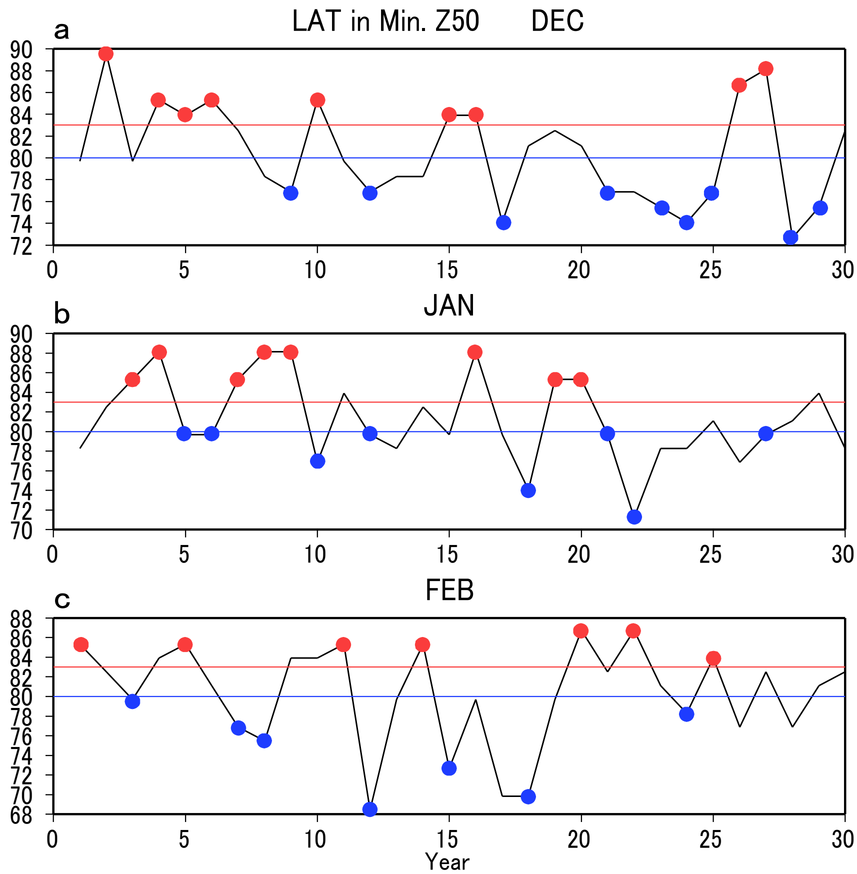


Figure S2. Wintertime SST and sea-ice concentration differences between RCP8.5 and historical scenarios based on multi-model mean for (a) GLSST, (b) AICE, (c) MLSST, and (d) LLSST responses.



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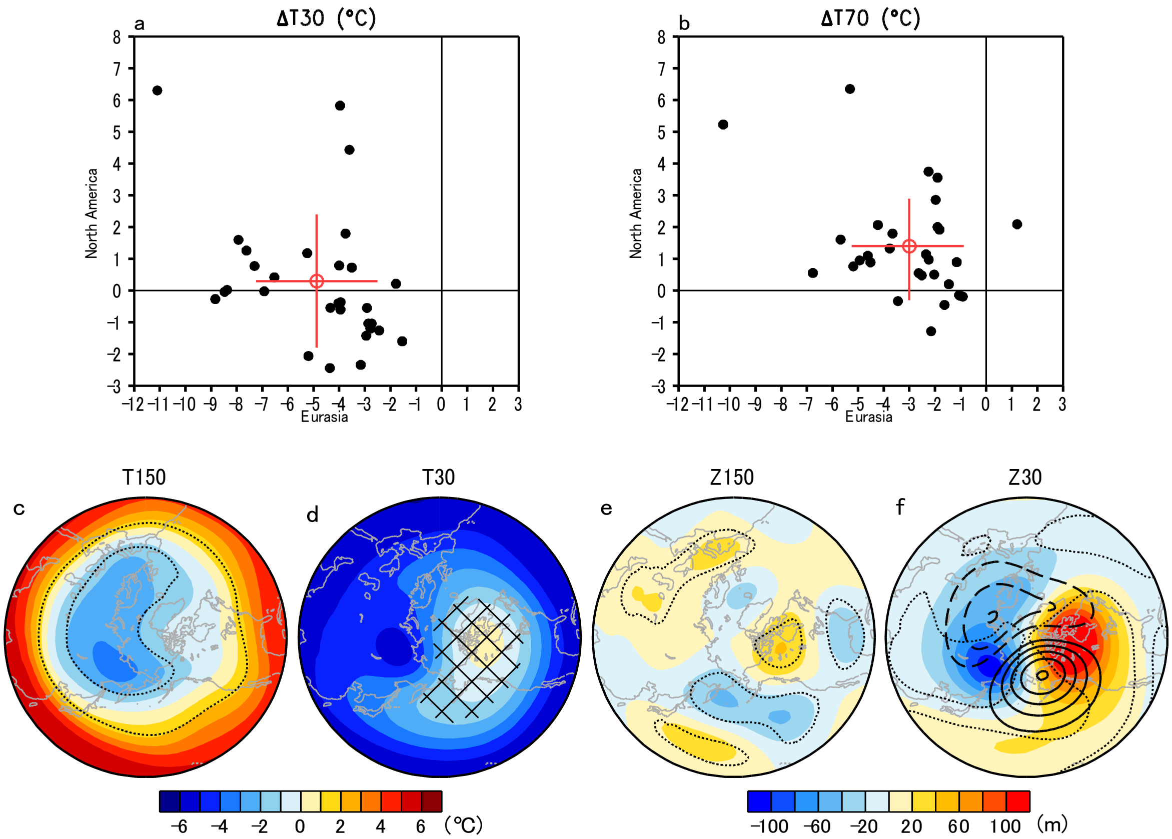

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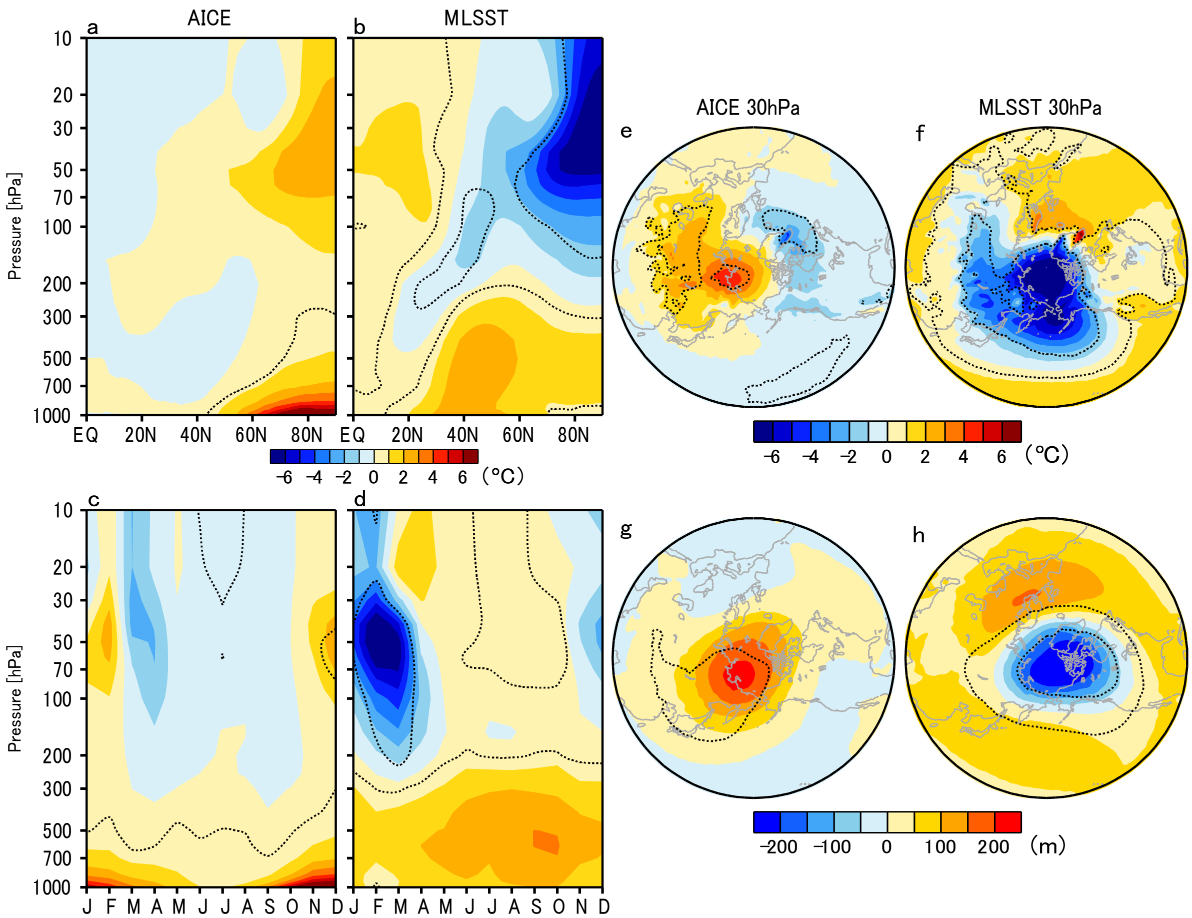

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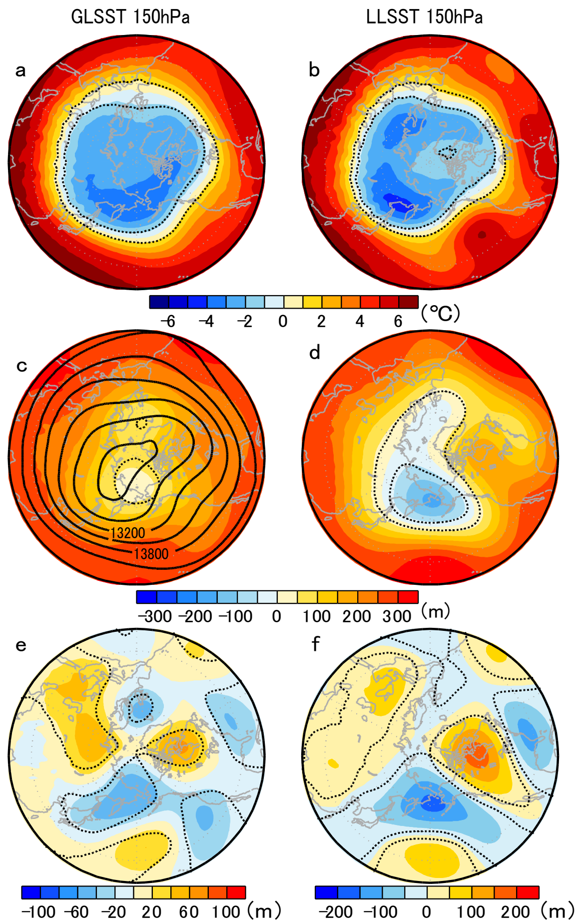

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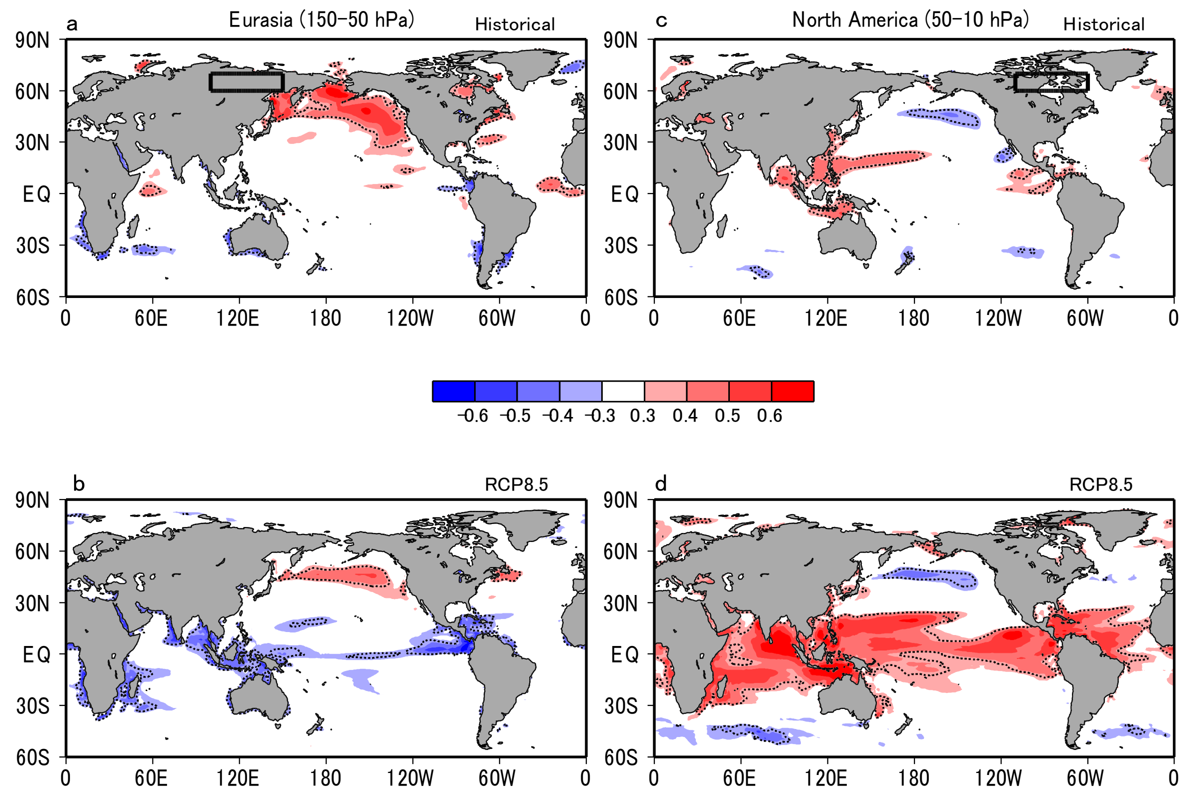

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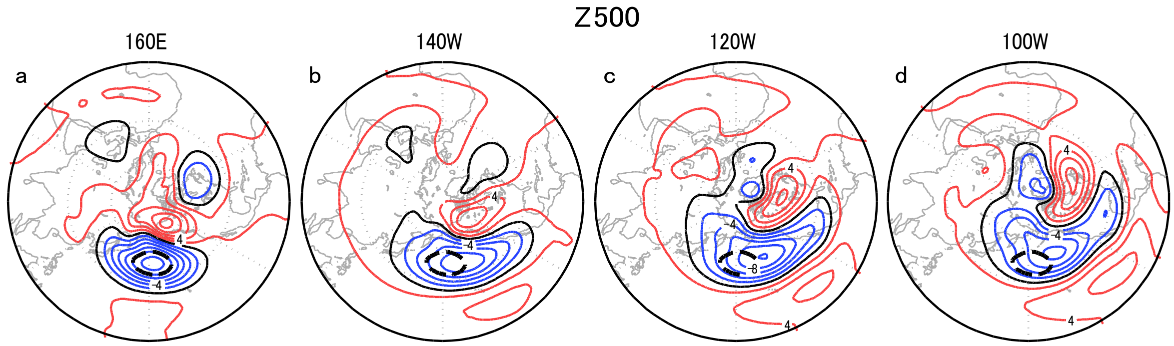

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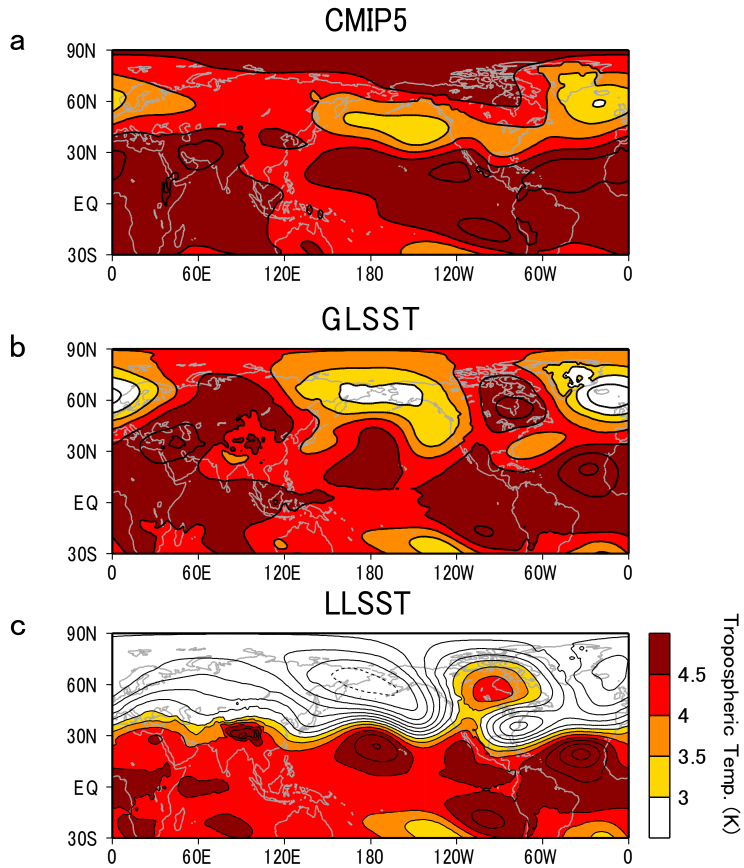

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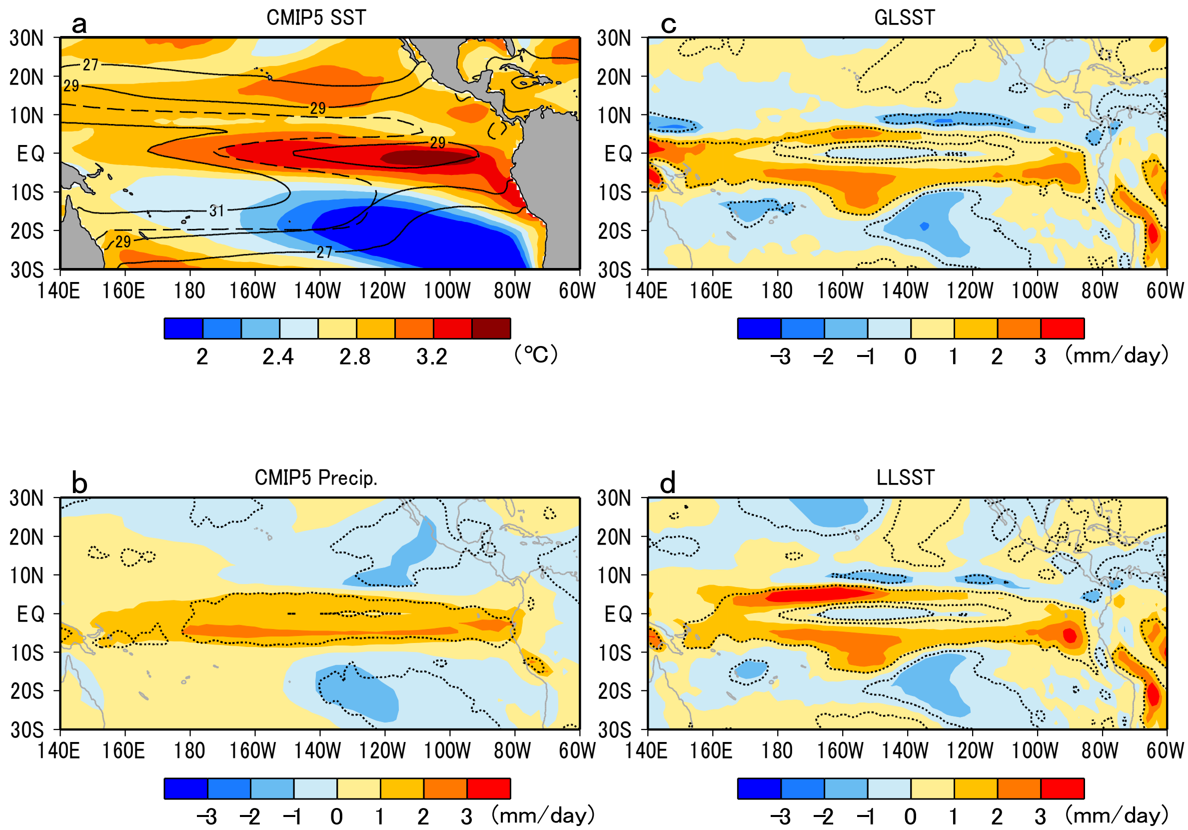

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Table S1. CMIP5 Models used in this study.

No.	Model	No.	Model
1	ACCESS1-0	16	HadGEM2-AO
2	ACCESS1-3	17	HadGEM2-CC
3	bcc-csm1-1	18	HadGEM2-ES
4	bcc-csm1-1-m	19	inmcm4
5	CCSM4	20	IPSL-CM5A-LR
6	CESM1-BGC	21	IPSL-CM5A-MR
7	CESM1-CAM5	22	IPSL-CM5B-LR
8	CMCC-CM	23	MIROC-ESM-CHEM
9	CMCC-CMS	24	MIROC-ESM
10	CNRM-CM5	25	MIROC5
11	CanESM2	26	MPI-ESM-LR
12	FIO-ESM	27	MPI-ESM-MR
13	GFDL-CM3	28	MRI-CGCM3
14	GISS-E2-H	29	NorESM1-M
15	GISS-E2-R	30	NorESM1-ME

Table S2. A description of AGCM simulations.

Name	Description
HIST	Historical global SST and sea ice distribution
GLSST	RCP8.5 global SST and sea ice distribution
AICE	RCP8.5 Arctic sea ice distribution
MLSST + AICE	RCP8.5 mid-latitude SST and Arctic sea ice distribution