

Ozone-vegetation feedbacks through dry deposition and isoprene emissions in a global chemistry-carbon-climate model

5 Cheng Gong^{1,2}, Yadong Lei^{2,3}, Yimian Ma^{2,3}, Xu Yue^{4*} and Hong Liao^{4*}

¹State Key Laboratory of Atmospheric Boundary Layer Physics and Atmospheric Chemistry (LAPC), Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, 100029, China

²University of Chinese Academy of Sciences, Beijing, 100029, China

³Climate Change Research Center, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing 100029, China

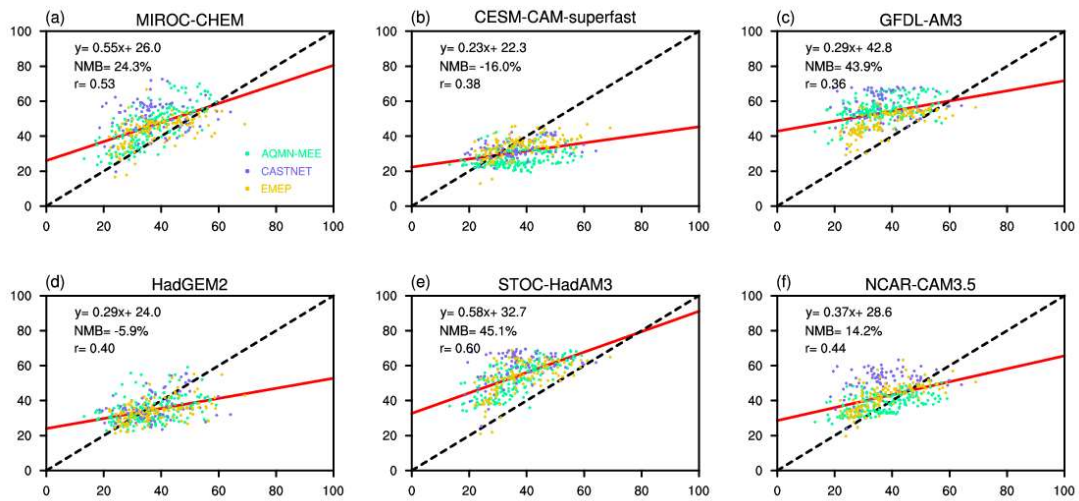
10 ⁴Jiangsu Key Laboratory of Atmospheric Environment Monitoring and Pollution Control, Jiangsu Collaborative Innovation Center of Atmospheric Environment and Equipment Technology, School of Environmental Science and Engineering, Nanjing University of Information Science and Technology, Nanjing, 210044, China

Correspondence to: Xu Yue (yuexu@nuist.edu.cn) and Hong Liao (hongliao@nuist.edu.cn)

Table S1

PFTs	m	b (mmol m ⁻² s ⁻¹)	a_high (mmol ⁻¹ m ⁻²)	a_low (mmol ⁻¹ m ⁻²)	F _{O₃,crit} (nmol m ⁻² s ⁻¹)
TDA	9.0	2	0.1	0.03	1.6
GRAC3	11.0	8	1.4	0.25	5.0
SHRUB	9.0	2	0.1	0.03	1.6
SAV	9.0	2	1.4	0.25	5.0
DBF	9.0	2	0.15	0.04	1.6
ENF	9.0	2	0.075	0.02	1.6
EBF	9.0	2	0.15	0.04	1.6
CROC3	11.0	8	1.4	0.25	5.0
GRAC4/CROC4	5.0	2	0.735	0.13	5.0

5 Plant functional types (PFTs) are tundra (TDA), C3 grassland (GRAC3), shrubland (SHR), savanna (SAV), deciduous broadleaf forest (DBF), evergreen needleleaf forest (ENF), evergreen broadleaf forest (EBF), C3 cropland (CROC3) and C4 grassland/cropland (GRAC4/CROC4).



5 **Figure S1.** Evaluations of simulated summer surface O_3 concentrations performed by six model members of ACCMIP in present day with ground-level O_3 observations from AQMN-MEE in China, CASTNET in U.S. and EMEP in Europe. The red line shows the linear regression between the observed and simulated O_3 concentrations. The black dashed line shows the 1:1 lines.

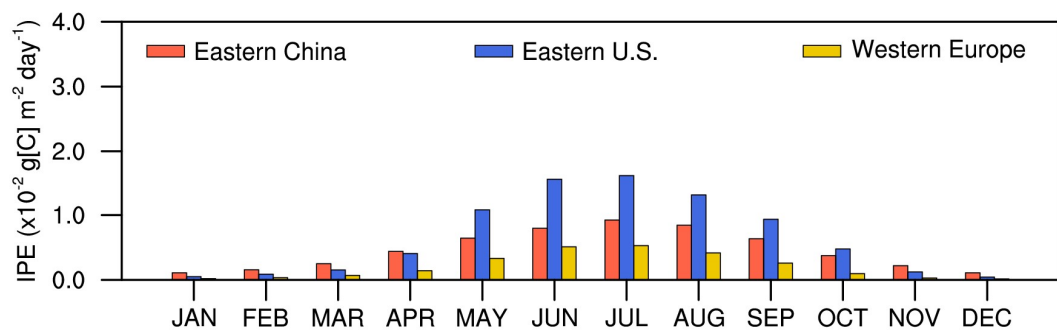
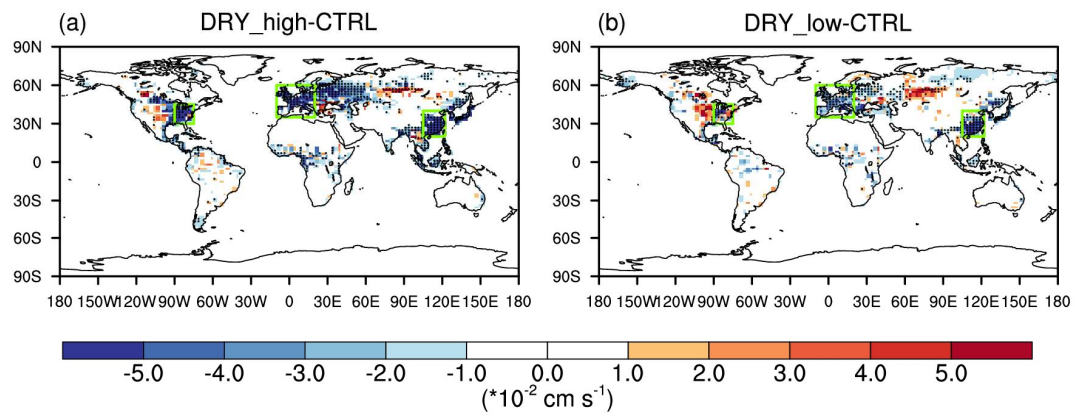


Figure S2. Monthly mean IPE in the CTRL simulation averaged over eastern China, eastern U.S. and western Europe, respectively.

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5 **Figure S3:** Effects of O₃ damage to stomatal conductance on summertime O₃ dry deposition velocity (cm s⁻¹) with (a) high and (b) low damaging sensitivities. Dotted grids indicate significant changes at 95% confidence. Three box regions are denoted for eastern China, eastern U.S., and western Europe.

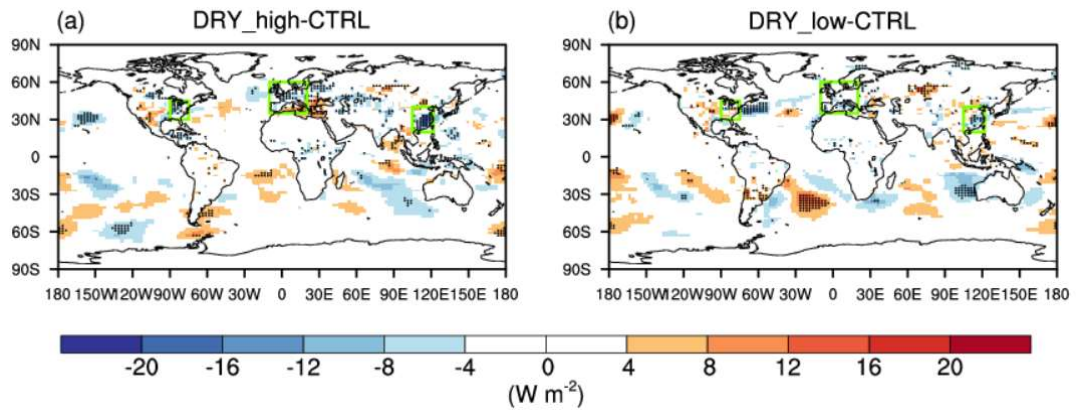


Figure S4. Same as Fig. S2 but for the latent heat flux (W m^{-2}).

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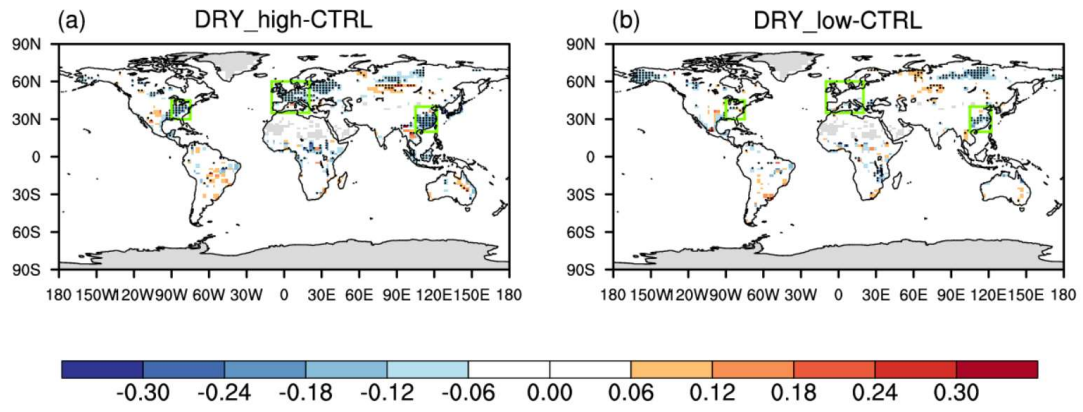


Figure S5. Changes of LAI due to O₃ damages to photosynthesis in summer for (a) high and (b) low sensitivity. Dotted grids indicate significant changes at 95% confidence.

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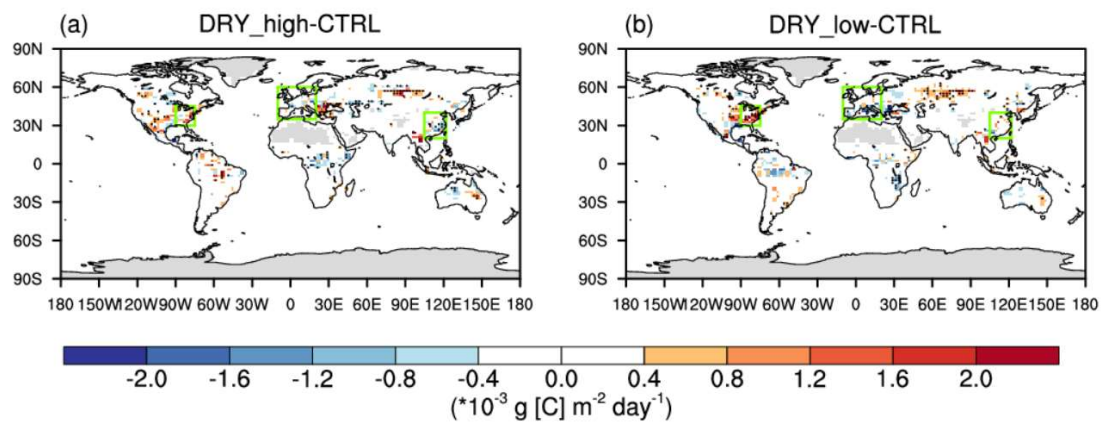


Figure S6. Same as Fig.S4 but for meteorological feedback to IPE.

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