



Supplement of

Tracing the origins of stratospheric ozone intrusions: direct vs. indirect pathways and their impacts on Central and Eastern China in spring–summer 2019

Kai Meng et al.

Correspondence to: Kai Meng (macka@foxmail.com) and Tianliang Zhao (tlzhao@nuist.edu.cn)

The copyright of individual parts of the supplement might differ from the article licence.

Table S1 Impacts of various critical source areas (CSAs) on the six sub-regions of the CEC

			NE	NC	LP	CC	EC	SC	
Indirect intrusions	Middle troposphere	CSAm1	4.68	7.00	10.24	2.89	3.73	0.86	
		CSAm2	0.13	0.14	0.09	0.31	0.46	0.63	
	Lower troposphere	CSA11	1.16	2.09	1.40	1.31	1.83	0.41	
		CSA12	0.84	1.36	1.56	1.87	1.38	0.39	
		CSA13	0.73	0.51	0.14	0.07	0.11	0.01	
		CSA14	0.08	0.19	0.02	0.07	0.17	0.09	
	Direct intrusions	Middle troposphere	2CSAm1	1.64	4.15	5.99	1.02	1.12	0.10
			2CSAm2	1.04	1.78	0.73	1.52	2.48	0.53
Lower troposphere		2CSA11	0.25	0.04	0.01	0.01	0.03	0.00	
		2CSA12	0.13	0.35	0.39	0.13	0.24	0.00	

Note. NE (NorthEast China); NC (North China); LP (Loess Plateau); CC (Central China); EC (East China); SC (Southern China).

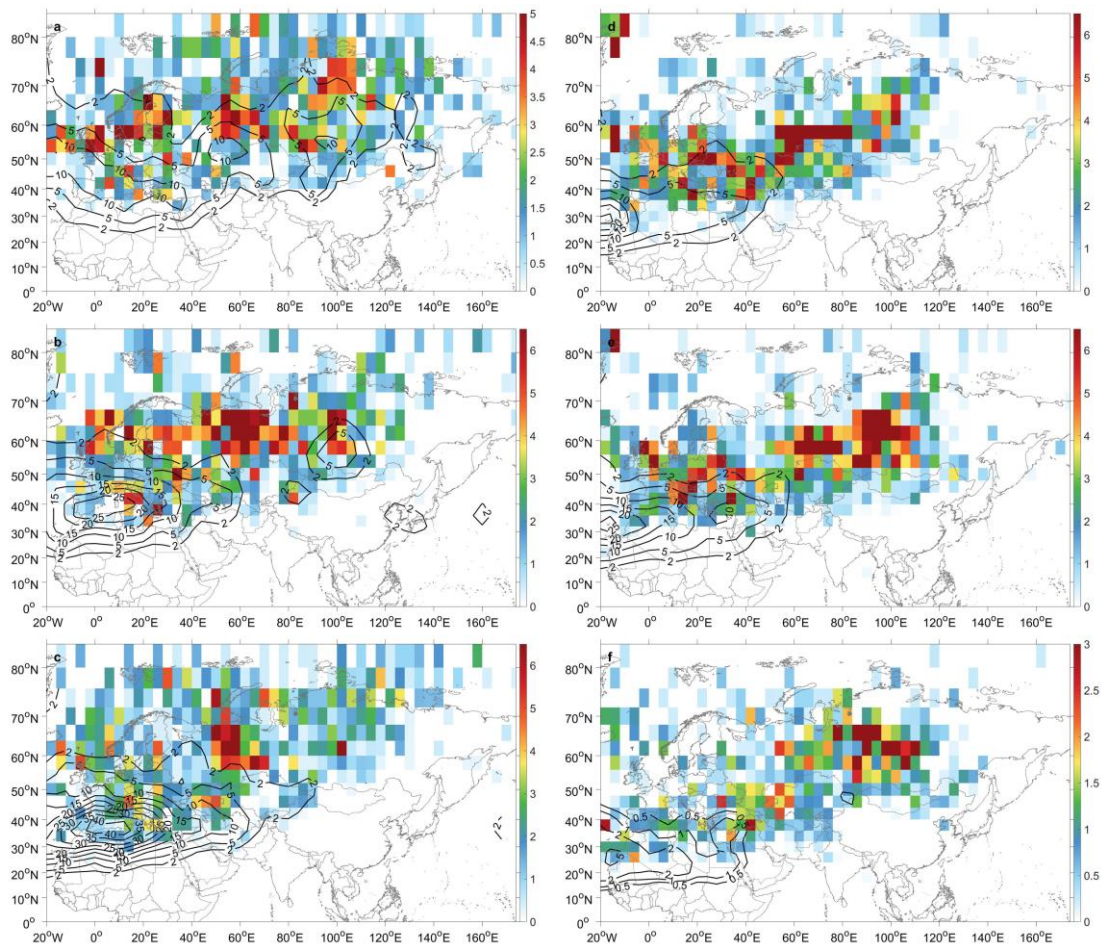


Figure S1: Distributions of CSAII for ISI intruding the lower troposphere (color shaded) and middle troposphere (black lines) of a) NE, b) NC, c) LP, d) CC, e) EC and f) SC in May in 2019.

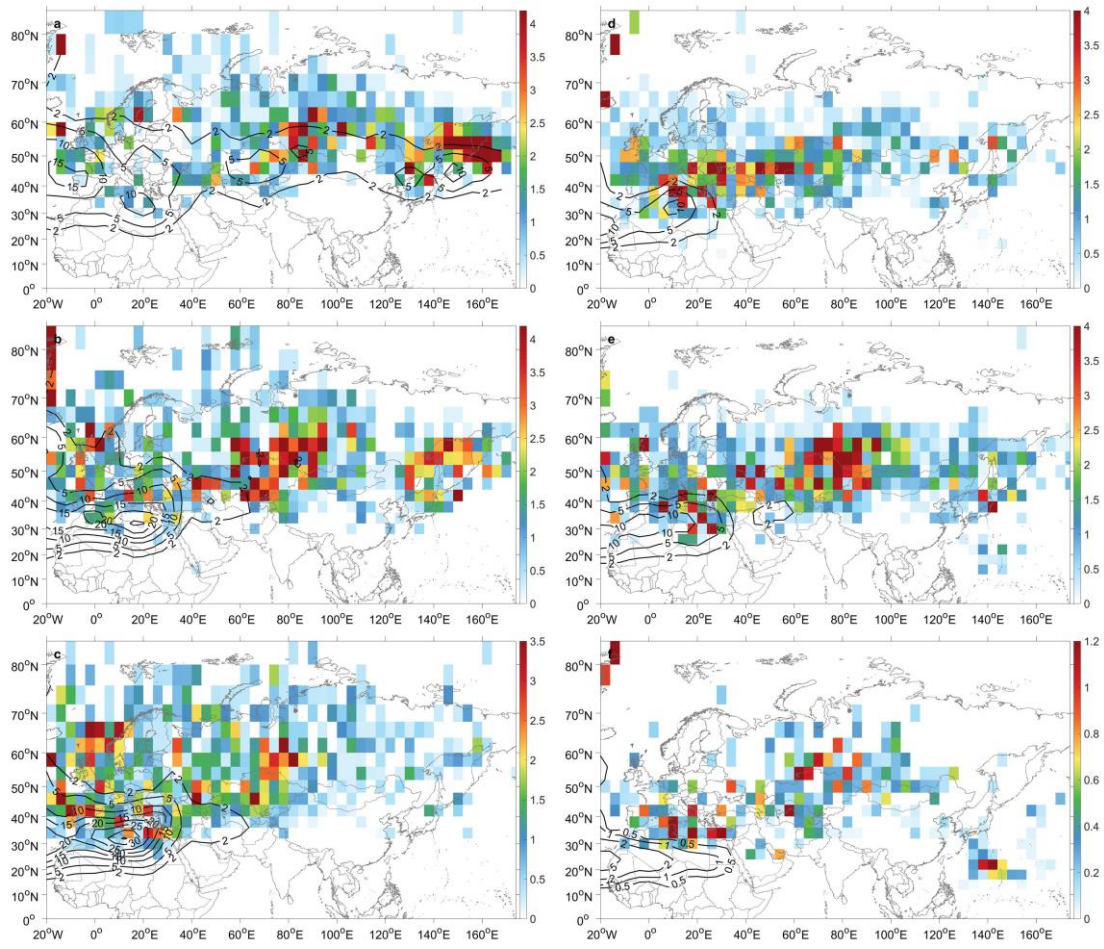


Figure S2: Same as Fig. S1 but for June.

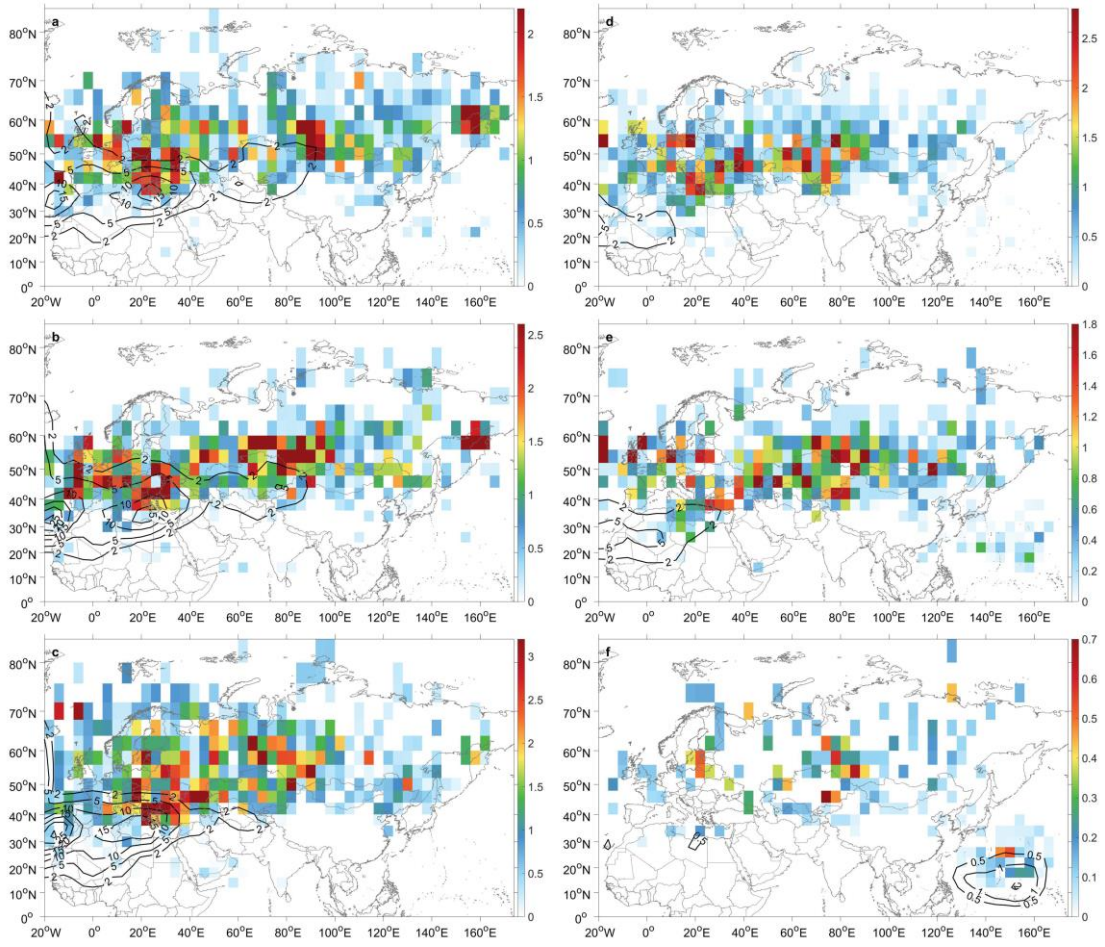


Figure S3: Same as Fig. S1 but for July.

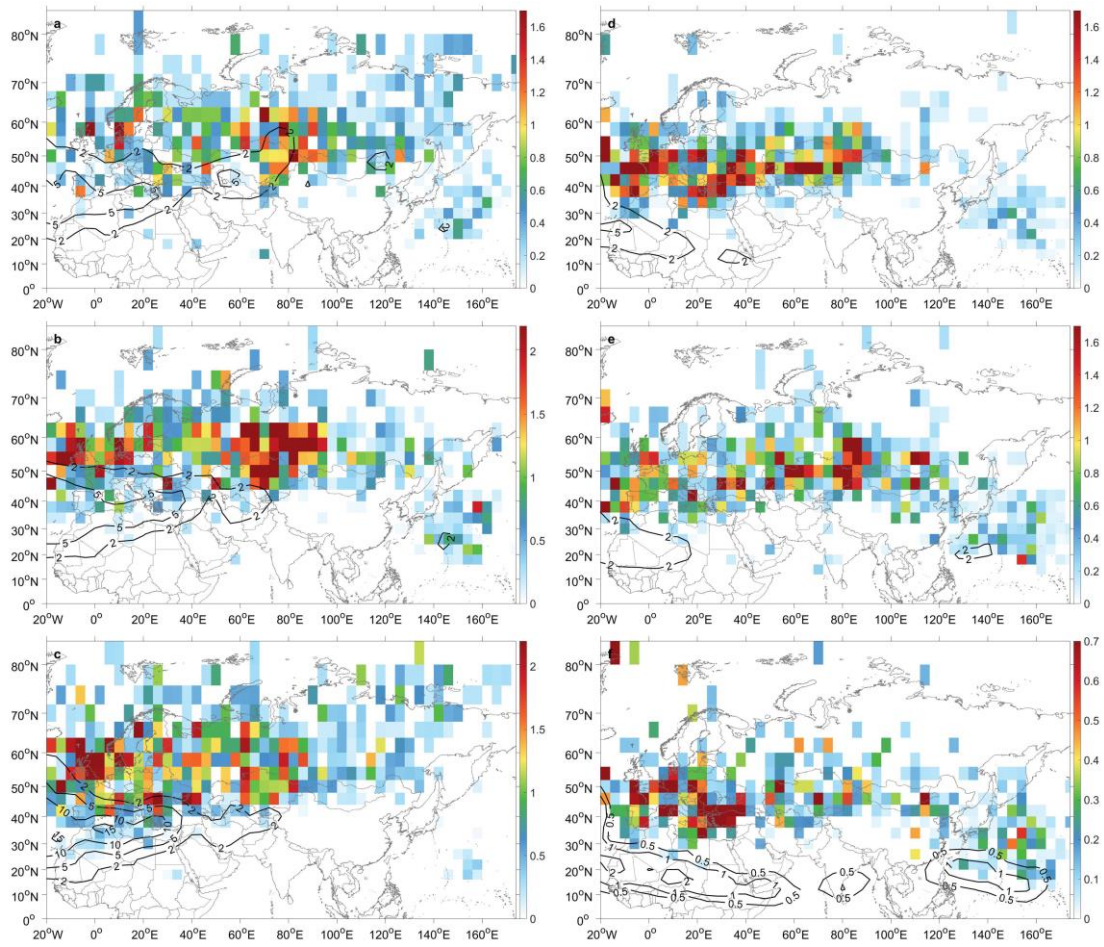


Figure S4: Same as Fig. S1 but for August.

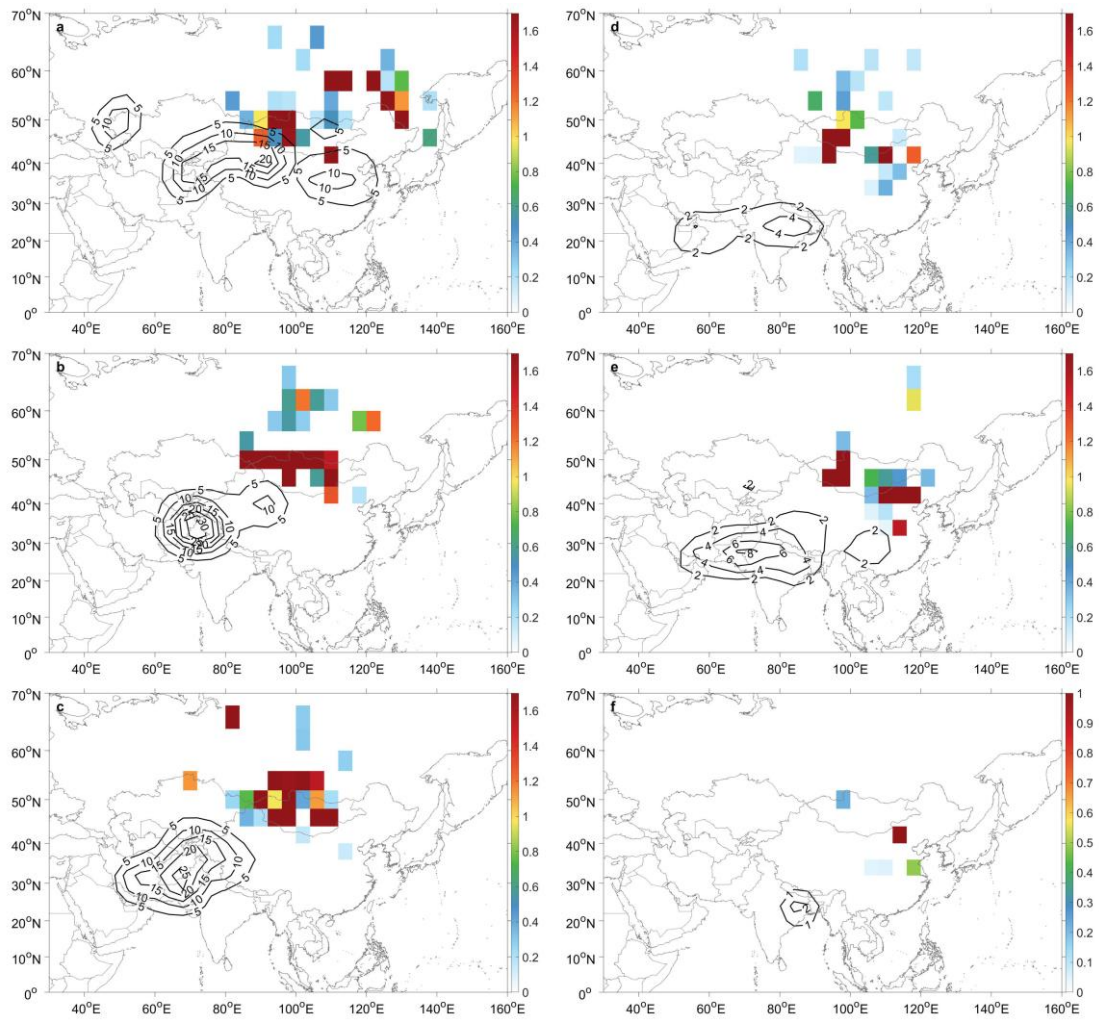


Figure S5: Distributions of CSAII for DSI intruding the lower troposphere (color shaded) and middle troposphere (black lines) of a) NE, b) NC, c) LP, d) CC, e) EC and f) SC in May in 2019.

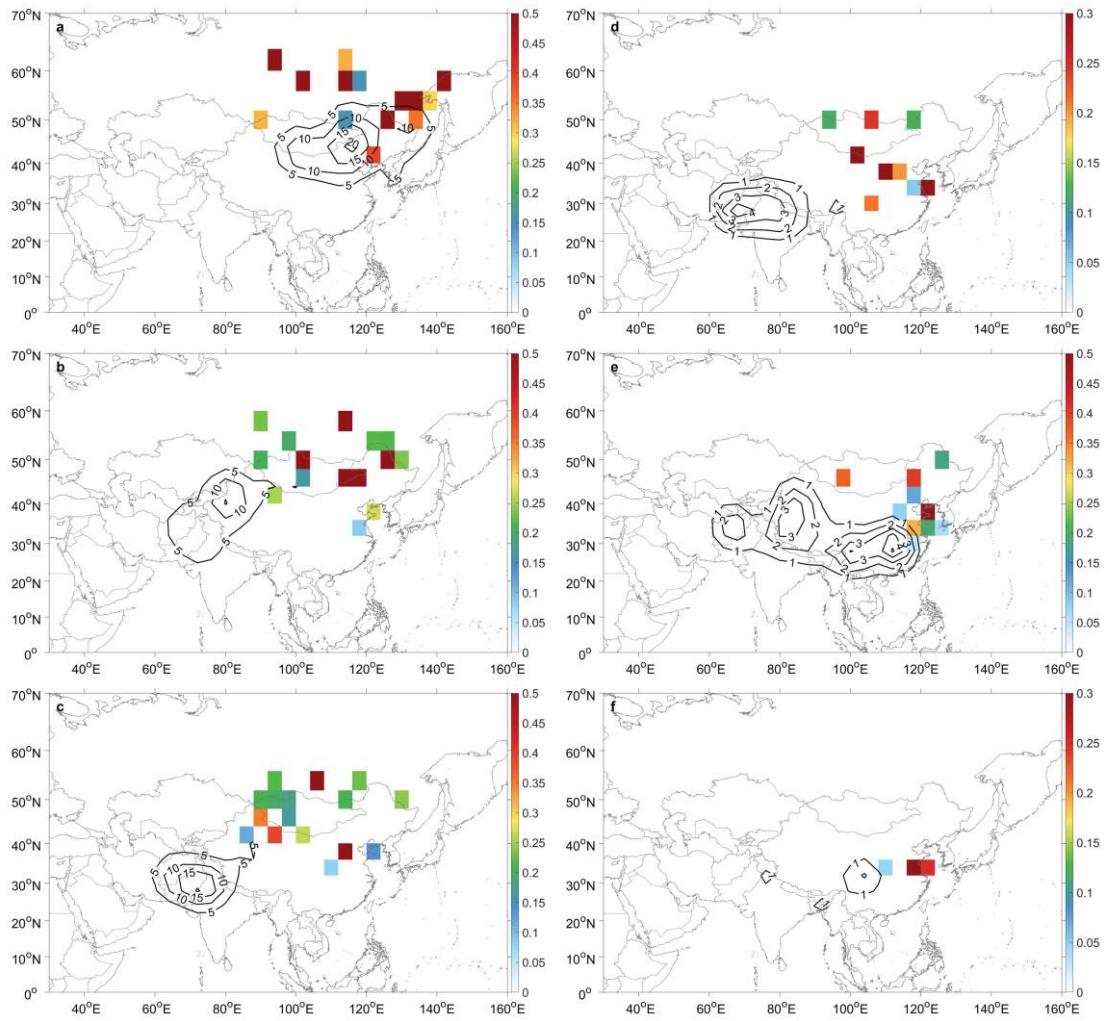


Figure S6: Same as Fig. S5 but for June.

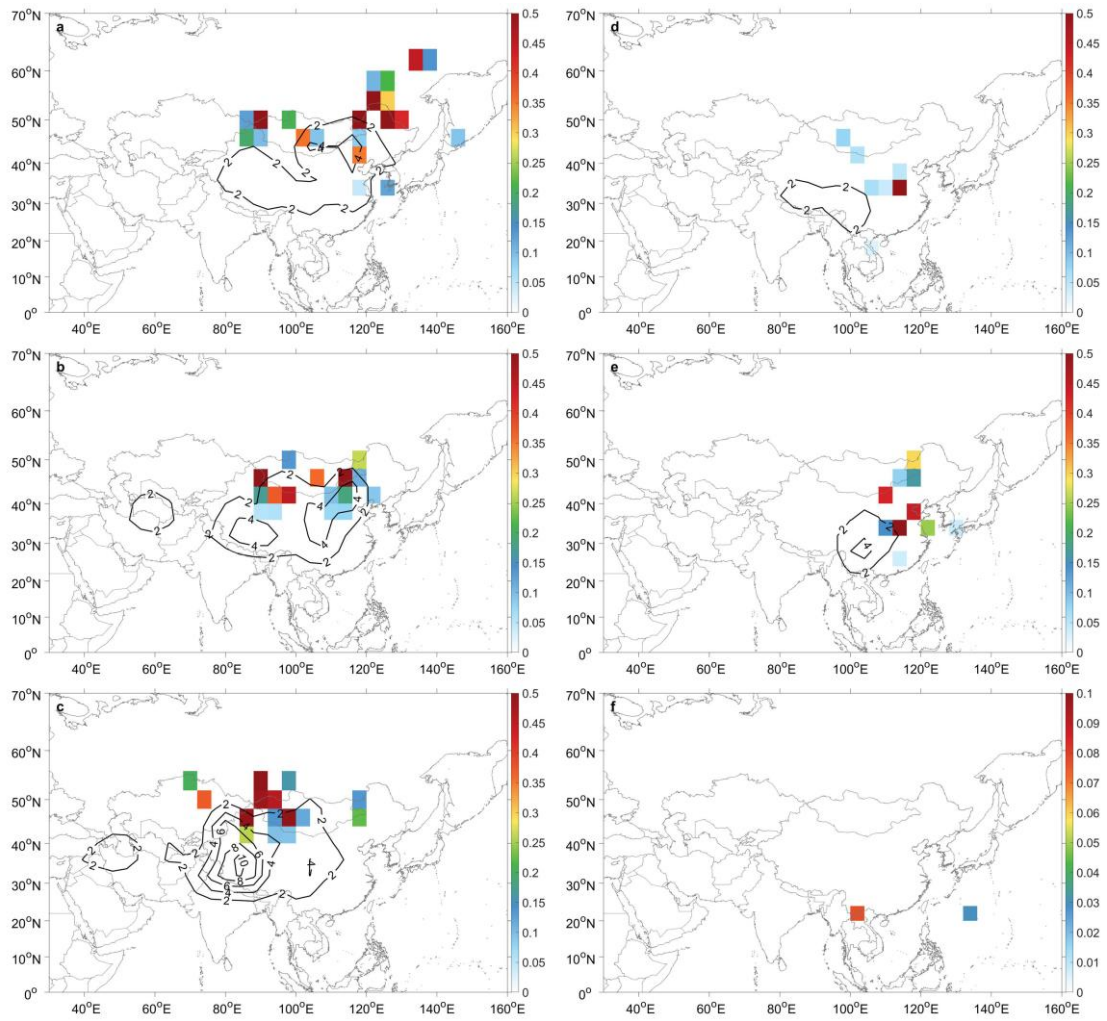


Figure S7: Same as Fig. S5 but for July.

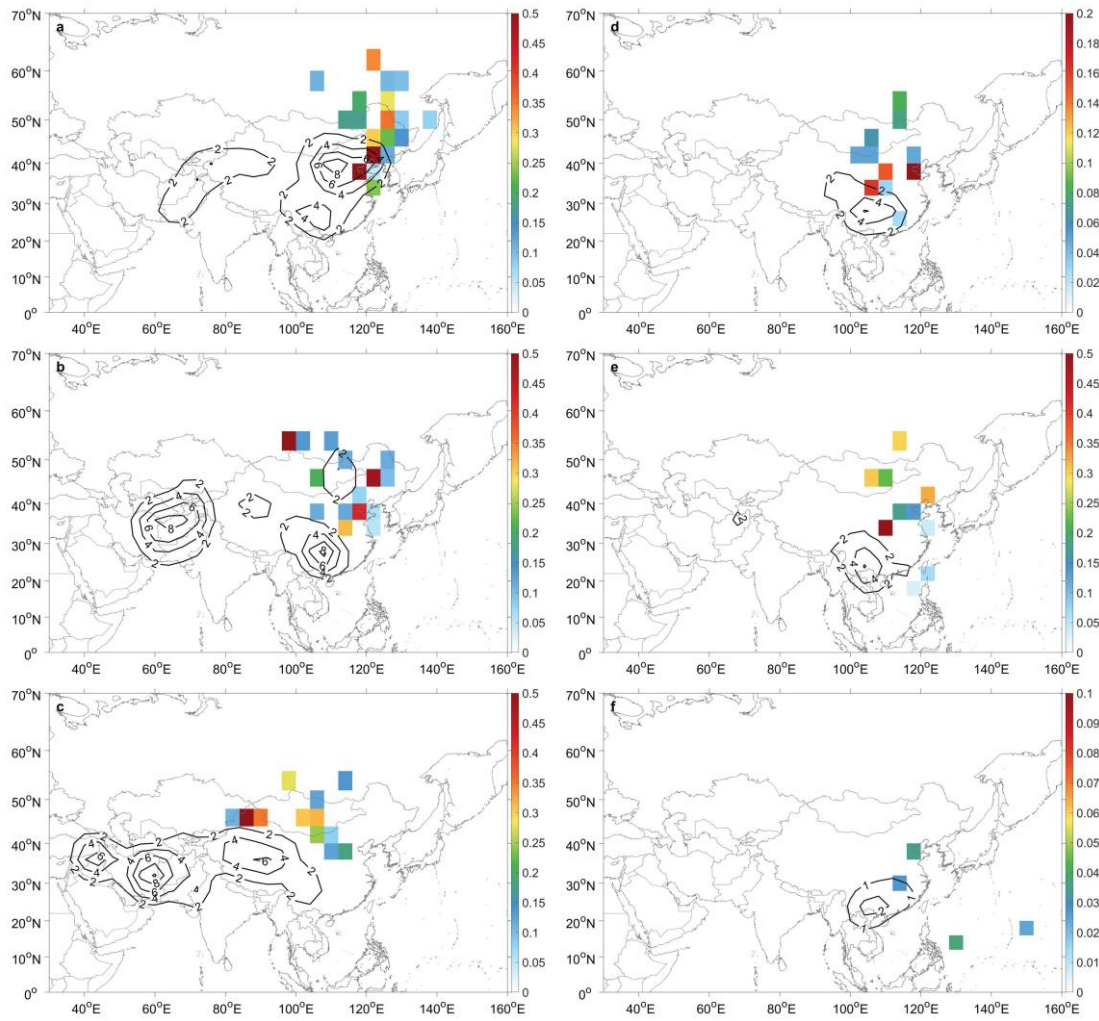


Figure S8: Same as Fig. S5 but for August.