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Supporting Information for

**Long-range transport of anthropogenic air pollutants into the  
marine air: Insight into fine particle transport and chloride depletion  
on sea salts**

Liang Xu<sup>1</sup>, Xiaohuan Liu<sup>2</sup>, Huiwang Gao<sup>2</sup>, Xiaohong Yao<sup>2</sup>, Daizhou Zhang<sup>3</sup>, Lei Bi<sup>1</sup>, Lei Liu<sup>1</sup>,

Jian Zhang<sup>1</sup>, Yinxiao Zhang<sup>1</sup>, Yuanyuan Wang<sup>1</sup>, Qi Yuan<sup>2</sup>, Weijun Li<sup>1,\*</sup>

<sup>1</sup>Department of Atmospheric Sciences, School of Earth Sciences, Zhejiang University, Hangzhou  
310027, China

<sup>2</sup>Key Laboratory of Marine Environment and Ecology, Ministry of Education, Ocean University of  
China, Qingdao 266100, China

<sup>3</sup>Faculty of Environmental and Symbiotic Sciences, Prefectural University of Kumamoto,  
Kumamoto 862-8502, Japan

\*Corresponding author: W. Li (liweijun@zju.edu.cn)

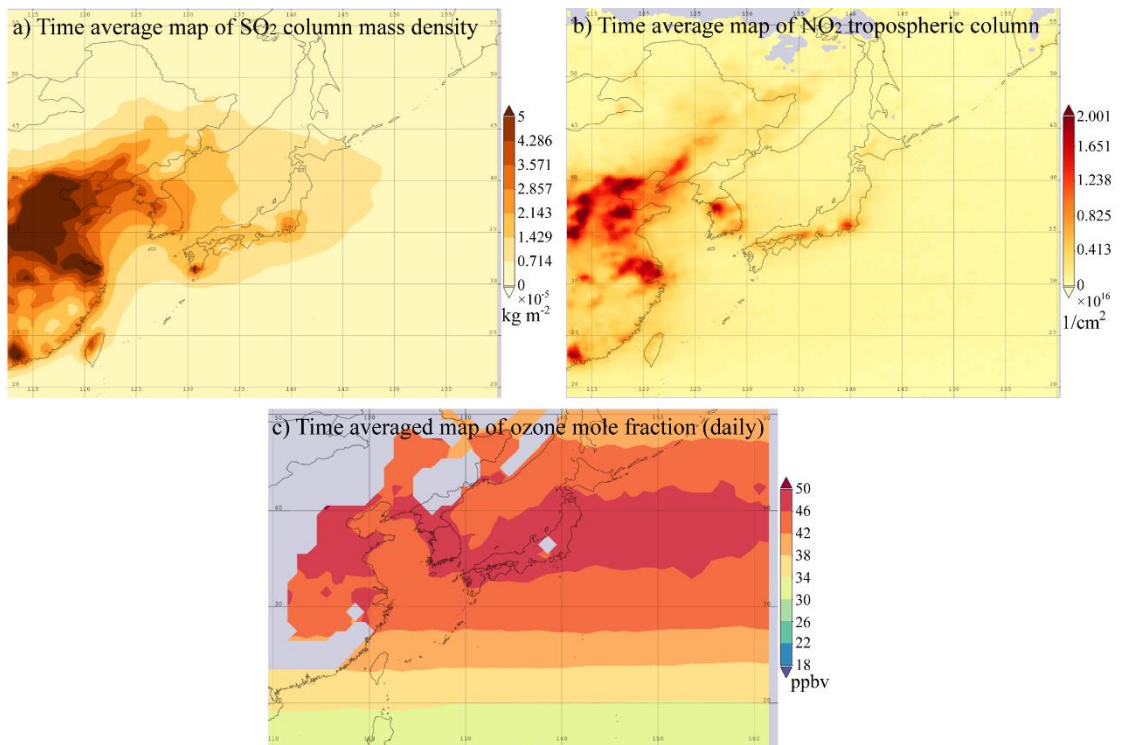
16 Table 1. Detailed information about sampling dates, times, and meteorological  
 17 conditions for samples.

<b>ID</b>	<b>Date</b>	<b>Time</b>	<b>Duration</b>	<b>RH</b>	<b>Wind speed</b>
		(BJT, UTC+8)	(Second)	(%)	(m/s)
1	3/18	19:40	120	73.80	4.4
2	3/19	09:21	120	77.80	5.0
3	3/19	14:20	180	85.30	5.8
4	3/21	18:36	180	53.20	7.4
5	3/22	16:20	180	46.10	1.8
6	3/23	15:48	180	50.30	7
7	3/24	10:36	180	44.50	3.2
8	3/24	15:27	180	41.10	3.1
9	3/26	21:02	180	59.90	1.7
10	4/10	09:20	180	71.20	8.2
11	4/13	14:52	180	51.70	1.6
12	4/15	11:52	180	40.60	5.6
13	4/17	15:13	180	64.14	2.1
14	4/18	15:02	180	73.60	6.3
15	4/19	15:56	180	69.50	4.2
16	4/21	07:59	180	54.90	1.5
17	4/21	10:43	180	71.00	16.4
18	4/21	15:06	180	75.40	13.7

19	4/21	17:47	180	74.50	2.9
20	4/22	09:25	180	74.80	2.3
21	4/22	12:35	180	78.30	12.3
22	4/22	12:44	180	78.30	12.3

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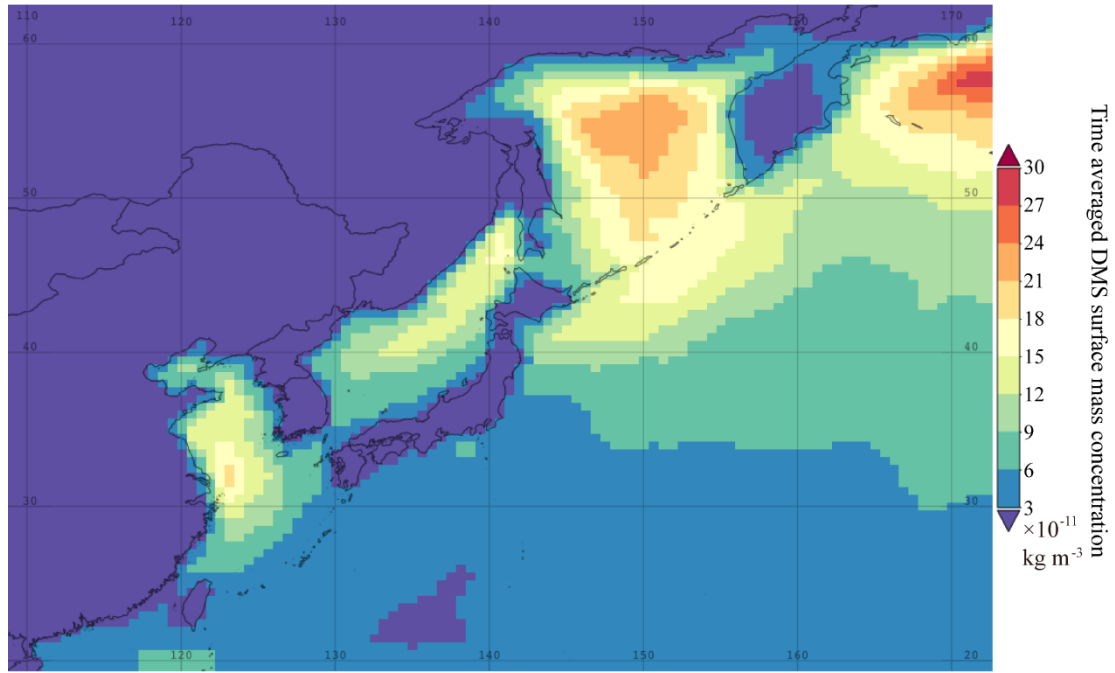
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21 Figure S1. Time averaged map of SO<sub>2</sub> column mass density, NO<sub>2</sub> tropospheric column,  
 22 and O<sub>3</sub> mole fraction during our observation (17 March to 22 April 2014). The images  
 23 were downloaded from NASA Giovanni website  
 24 (<http://giovanni.gsfc.nasa.gov/giovanni>) (Acker and Leptoukh, 2007).

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27 Figure S2. Time averaged map of dimethyl sulfide (DMS) surface mass concentration  
 28 over March to April 2014. The image was downloaded from NASA Giovanni website  
 29 (<http://giovanni.gsfc.nasa.gov/giovanni>) (Acker and Leptoukh, 2007).

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31 **References**

32 Acker, J. G., and Leptoukh, G.: Online analysis enhances use of NASA Earth science data, Eos  
 33 Transactions, American Geophysical Union, 88, 14-17, <https://doi.org/10.1029/2007EO020003>,  
 34 2007.

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