

Supplement of Radiative absorption enhancement of dust mixed with anthropogenic pollution over East Asia

Pengfei Tian^{1,2}, Lei Zhang¹, Jianmin Ma^{2,3}, Kai Tang¹, Lili Xu¹, Yuan Wang⁴, Xianjie Cao¹, Jiening Liang¹, Yuemeng Ji⁵, Jonathan H. Jiang⁶, Yuk L. Yung⁴, Renyi Zhang⁵

¹Key Laboratory for Semi-Arid Climate Change of the Ministry of Education, College of Atmospheric Sciences, Lanzhou University, Lanzhou, China

²Key Laboratory for Environmental Pollution Prediction and Control, Gansu Province, College of Earth and Environmental Sciences, Lanzhou University, Lanzhou, China

³Laboratory for Earth Surface Processes, College of Urban and Environmental Sciences, Peking University, Beijing, China

⁴Division of Geological and Planetary Sciences, California Institute of Technology,
Pasadena, CA 91125, USA

⁵Department of Atmospheric Sciences, Texas A&M University, College Station, Texas, 77843, USA

⁶Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California
91125 USA

Correspondence to: Lei Zhang (zhanglei@lzu.edu.cn) and Yuan Wang (Yuan.Wang@caltech.edu)

20

21

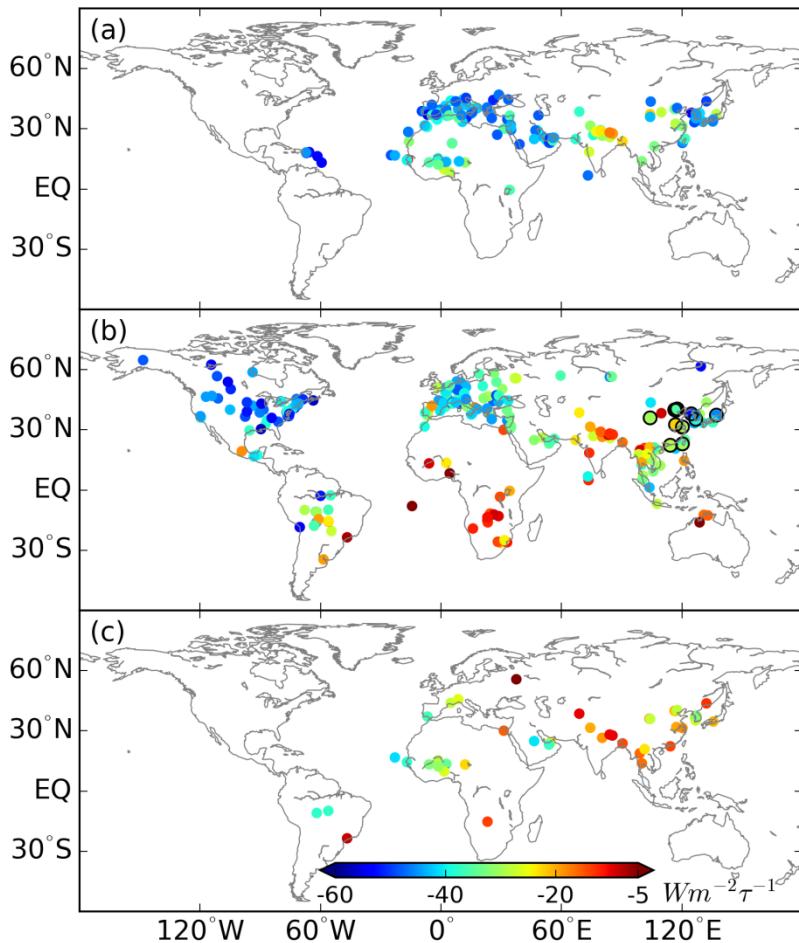
Table S1 Information of the selected East Asian sites

Site name	Longitude	Latitude	Sample number	Time period
Baengnyeong	124.63 °E	37.97 °N	439	2010.08 - 2013.06
Beijing	116.38 °E	39.98 °N	3624	2001.03 - 2015.03
Chen-Kung_Univ	120.22 °E	23.00 °N	1076	2002.03 - 2015.08
Gwangju_GIST	126.84 °E	35.23 °N	848	2004.03 - 2014.11
Hong_Kong_PolyU	114.18 °E	22.30 °N	335	2005.11 - 2015.03
Noto	137.14 °E	37.33 °N	240	2001.04 - 2014.05
SACOL	104.14 °E	35.96 °N	1445	2006.08 - 2012.08
Shouxian	116.78 °E	32.56 °N	220	2008.05 - 2008.12
Taihu	120.22 °E	31.42 °N	1968	2005.09 - 2012.10
XiangHe	116.96 °E	39.75 °N	3483	2001.03 - 2015.08
Xinglong	117.58 °E	40.40 °N	542	2006.02 - 2012.05

22

23

24



25

26 **Figure S1.** Aerosol radiative efficiency at TOA: (a) dust aerosols, (b) anthropogenic aerosols, and
27 (c) mixed-type aerosols. Black circles represent sites in Table S1.

28