

# Evaluation and Comparison of Spatio-Temporal Relationship between Multiple Satellite Aerosol Optical Depth (AOD) and Near-Surface PM<sub>2.5</sub> Concentration Over China

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Supplementary Table S1. The detailed information for 14 urban agglomerations in our study.

Num	Urban Agglomeration	Abbreviation	Total Area (×10 <sup>4</sup> km <sup>2</sup> )	Cities included (number of cities)
1	Beijing-Tianjin-Hebei	BTH	22.6	Beijing, Tianjin, Tangshan, Baoding, Shijiazhuang, Qinhuangdao, Langfang, Zhangjiakou, Chengde, Cangzhou, Xingtai, Handan, Hengshui, Dingzhou, Xinji, Anyang (16)
2	Yangtze River Delta	YRD	22.5	Shanghai, Nanjing, Wuxi, Changzhou, Suzhou, Nantong, Yancheng, Yangzhou, Zhenjiang, Taizhou, Hangzhou, Ningbo, Jiaxing, Wenzhou, Huzhou, Shaoxing, Jinhua, Zhoushan, Taizhou, Hefei, Wuhu, Ma'anshan,

				Tongling, Anqing, Chuzhou, Chizhou, Xuancheng (27)
3	Pearl River Delta	PRD	42.2	Guangzhou, Shenzhen, Zhuhai, Foshan, Dongguan, Huizhou, Zhongshan, Jiangmen, Zhaoqing, Sahnwei, Qingyuan, Yunfu, Heyuan, Shaoguan, Yangjiang (15)
				Zhengzhou, Luoyang, Kaifeng, Nanyang, An'yang, Shangqiu, Xinxiang, Pingdingshan, Xuchang, Jiaozuo, Zhoukou, Xinyang, Zhumadian, Hebi, Puyang, Luohe, Sanmenxia, Jiyuan, Changzhi, Jincheng, Yuncheng, Liaocheng, Heze, Suzhou, Huaibei, Fuyang, Bengbu, Haozhou, Xingtai, Handan (30)
4	Central Plain	CP	28.7	
5	Chengyu	CY	18.5	Chngqing, Chengdu, Zigong, Luzhou, Deyang, Mianyang, Suining, Neijiang, Leshan, Nanchong, Meishan, Yibin, Guang'an, Dazhou, Ya'an, Ziyang (16)
				Wuhan, Huangshi, Ezhou, Huanggang, Xiaogan, Xianning, Xiantao,
6	Yangtze River Mid-Reaches	YRM	31.7	Qianjiang, Tianmen, Xiangyang, Yichang, Jinmen, Jinzhou, Changsha, Zhuzhou, Xiangtan, Yueyang, Yiyang, Changde, Hengyang, Loudi, Nanchang, Jiujiang, Jingdezhen, Yingtan, Xinyu, Yichun, Pingxiang, Shangrao, Fuzhou, Ji'an (31)
				Jinan, Qingdao, Yantai, Zibo, Linyi, Weifang, Dongying, Weihai,
7	Shandong Peninsula	SP	7.3	Rizhao, Zaozhuang, Heze, Jining, Tai'an, Laiwu, Binzhou, Dezhou, Liaocheng (17)
8	Mid-Southern Liaoning	MSL	9.7	Shenyang, Dalian, Anshan, Fushun, Benxi, Dandong, Liaoyang, Yingkou, Panjin (9)
9	Hachang	HC	26.4	Harbin, Daqing, Qiqihar, Suihua, Mudanjiang, Changchun, Jilin, Siping, Liaoyuan, Songyuan, Yanbian (11)

10	Guanzhong Plain	GZP	10.7	Xi'an, Baoji, Xianyang, Tongchuan, Weinan, Shangluo, Yuncheng, Linfen, Tianshui, Pingliang, Qingyang (11)
11	HubaoEyu	HBEY	17.5	Hohhot, Baotou, Ordos, Yulin (4)
12	Lanxi	LX	9.8	Lanzhou, Xining, Haidong, Baiyin, Dingxi, Linxia Hui Autonomous Prefecture, Haibei Tibetan Autonomous Prefecture, Hainan Tibetan Autonomous Prefecture, Huangnan Tibetan Autonomous Prefecture (10)
13	Beibu_Gulf	BG	11.7	Nanning, Beihai, Qinzhou, Fangchenggang, Yulin, Chongzuo, Zhanjiang, Maoming, Yangjiang, Haikou, Danzhou, Dongfang, Chengmai, Lingao, Changjiang (15)
14	West coast Taiwan Strait	WCTS	12.4	Fuzhou, Xiamen, Quanzhou, Putian, Zhangzhou, Sanming, Nanping, Ningde, Longyan, Wenzhou, Lishui, Quzhou, Shangrao, Yingtian, Fuzhou, Ganzhou, Shantou, Chaozhou, Jieyang, Meizhou (20)