

	Hangzhou	Xiaoshan	Fuyang	LinAn	Tonglu	Jiande	ChunAn
Site type	Urban	Suburban	Suburban	Suburban	Suburban	Suburban	Rural
Longitude (° E)	120.19	120.25	119.95	119.72	119.64	119.27	119.05
Latitude (° N)	30.26	30.16	30.07	30.23	29.80	29.49	29.61
Altitude (m)	41.9	14.0	17.0	139	46.1	88.9	171.4
$N_{\text{day}}^{\text{a}}$	485	180	217	562	498	480	439
$N_{\text{inst.}}^{\text{b}}$	2052	752	906	2410	2255	1952	1731
AOD <sub>440 nm</sub> <sup>c</sup>	0.76 ± 0.42	0.76 ± 0.43	0.76 ± 0.45	0.73 ± 0.44	0.71 ± 0.41	0.73 ± 0.40	0.68 ± 0.38
AOD <sub>fine(440 nm)</sub> <sup>c</sup>	0.68 ± 0.42	0.69 ± 0.41	0.69 ± 0.44	0.66 ± 0.43	0.64 ± 0.41	0.66 ± 0.40	0.61 ± 0.38
AOD <sub>coarse(440 nm)</sub> <sup>c</sup>	0.08 ± 0.06	0.07 ± 0.06	0.07 ± 0.06	0.07 ± 0.07	0.07 ± 0.06	0.07 ± 0.07	0.06 ± 0.05
EAE <sub>440–870 nm</sub> <sup>d</sup>	1.29 ± 0.26	1.37 ± 0.24	1.32 ± 0.24	1.29 ± 0.27	1.30 ± 0.26	1.32 ± 0.28	1.22 ± 0.25
SSA <sub>440 nm</sub> <sup>c</sup>	0.91 ± 0.06	0.93 ± 0.04	0.94 ± 0.04	0.93 ± 0.05	0.92 ± 0.04	0.92 ± 0.05	0.94 ± 0.03
SSA <sub>670 nm</sub> <sup>e</sup>	0.92 ± 0.06	0.91 ± 0.06	0.93 ± 0.06	0.92 ± 0.05	0.93 ± 0.05	0.92 ± 0.07	0.94 ± 0.03
SSA <sub>870 nm</sub> <sup>f</sup>	0.90 ± 0.07	0.90 ± 0.07	0.91 ± 0.08	0.91 ± 0.06	0.91 ± 0.06	0.90 ± 0.08	0.93 ± 0.04
SSA <sub>1020 nm</sub> <sup>g</sup>	0.89 ± 0.08	0.89 ± 0.08	0.89 ± 0.09	0.90 ± 0.07	0.90 ± 0.07	0.90 ± 0.09	0.92 ± 0.05
AAOD <sub>440 nm</sub> <sup>c</sup>	0.06 ± 0.05	0.05 ± 0.04	0.04 ± 0.04	0.05 ± 0.04	0.05 ± 0.04	0.06 ± 0.04	0.04 ± 0.03
AAE <sub>440–870 nm</sub> <sup>d</sup>	1.13 ± 0.46	0.88 ± 0.42	0.85 ± 0.43	0.98 ± 0.35	1.11 ± 0.49	1.16 ± 0.44	0.93 ± 0.31
$R_{\text{eff}_t}$ (μm) <sup>c</sup>	0.30 ± 0.10	0.29 ± 0.09	0.30 ± 0.09	0.29 ± 0.10	0.29 ± 0.10	0.29 ± 0.09	0.30 ± 0.10
$R_{\text{eff}_{\text{fine}}}$ (μm) <sup>c</sup>	0.16 ± 0.04	0.16 ± 0.03	0.17 ± 0.04	0.16 ± 0.04	0.16 ± 0.04	0.17 ± 0.04	0.17 ± 0.04
$R_{\text{eff}_{\text{coarse}}}$ (μm) <sup>c</sup>	2.21 ± 0.40	2.26 ± 0.35	2.30 ± 0.39	2.24 ± 0.44	2.19 ± 0.41	2.16 ± 0.39	2.27 ± 0.42
Volume (μm <sup>3</sup> μm <sup>-2</sup> ) <sup>c</sup>	0.19 ± 0.09	0.19 ± 0.09	0.19 ± 0.09	0.18 ± 0.09	0.17 ± 0.09	0.18 ± 0.09	0.17 ± 0.07
Volume <sub>fine</sub> (μm <sup>3</sup> μm <sup>-2</sup> ) <sup>c</sup>	0.10 ± 0.06	0.11 ± 0.06	0.11 ± 0.07	0.10 ± 0.06	0.10 ± 0.06	0.10 ± 0.06	0.10 ± 0.06
Volume <sub>coarse</sub> (μm <sup>3</sup> μm <sup>-2</sup> ) <sup>c</sup>	0.09 ± 0.06	0.08 ± 0.05	0.08 ± 0.06	0.08 ± 0.05	0.08 ± 0.06	0.08 ± 0.07	0.07 ± 0.05
DARF-BOA (W m <sup>-2</sup> ) <sup>c</sup>	-93 ± 44	-84 ± 41	-80 ± 40	-81 ± 39	-79 ± 39	-82 ± 40	-74 ± 34
DARF-TOA (W m <sup>2</sup> ) <sup>c</sup>	-35 ± 20	-36 ± 21	-37 ± 21	-36 ± 21	-35 ± 20	-35 ± 21	-40 ± 19

<sup>a</sup> Number of available observation days. <sup>b</sup> Number of instantaneous observations. <sup>c</sup> Optical parameters at a wavelength of 440 nm. <sup>d</sup> Angström exponents between 440 and 870 nm. <sup>e</sup> Optical parameters at a wavelength of 670 nm. <sup>f</sup> Optical parameters at a wavelength of 870 nm. <sup>g</sup> Optical parameters at a wavelength of 1020 nm.