

1 **Supporting Information**

2 **Aircraft observations of water-soluble dicarboxylic acids in the aerosols over**

3 **China**

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20 **Table S1.** Information on the sample No., data, time, flight route, altitude (above ground level),
 21 air volume and location collected during three aircraft campaigns. Full flight track maps are
 22 shown in Figure S1.

Sample NO	Data	Local time	Route	Altitude (km)	Volume (m ³)	Lati., N	Longit., E
Winter 2002/2003							
W1	25-Dec-02	3:31~5:42	Changzhou-Shanghai	1.92	10.2	32.7	121.4
W2	25-Dec-02	6:22~7:51	Shanghai-Changzhou	2.91	6.9	32.2	120.5
W3	26-Dec-02	2:15~4:36	Changzhou-Shanghai	0.97	10.9	32.6	121.3
W4	26-Dec-02	4:41~7:08	Shanghai-Changzhou	0.51	11.4	32.4	120.8
W5	27-Dec-02	1:14~2:27	Changzhou-Ningbo	0.97	5.7	30.3	121.0
W6	28-Dec-02	2:08~4:05	Ningbo-Wenzhou	1.00	9.1	28.5	121.2
W7	28-Dec-02	4:09~6:07	Wenzhou-Ningbo	0.51	9.2	28.5	121.3
W8	31-Dec-02	1:20~3:44	Ningbo-Zhoushan	2.20	11.2	29.4	122.3
W9	31-Dec-02	3:49~5:57	Zhousan-Ningbo	0.70	9.9	29.5	122.3
W10	1-Jan-03	1:34~3:20	Ningbo-Wenzhou	2.04	8.2	28.3	121.8
W11	1-Jan-03	3:24~5:01	Wenzhou-Ningbo	2.13	12.2	27.9	121.5
W12	2-Jan-03	2:07~3:21	Ningbo-Changzhou	2.99	5.7	30.8	120.5
W13	3-Jan-03	4:09~7:16	Changzhou-Qingdao	1.89	14.5	33.6	120.2
W14	4-Jan-03	1:07~2:31	Qingdao-Dalian	1.96	6.5	37.7	120.6
W15	4-Jan-03	2:36~3:45	Dalian-Qingdao	1.11	5.4	36.3	120.2
W16	5-Jan-03	2:59~4:29	Qingdao-Qingdao East	1.88	7.0	36.6	122.0
W17	5-Jan-03	4:33~6:03	Qingdao East-Qingdao	0.50	7.0	36.4	121.5
W18	6-Jan-03	4:00~7:15	Qingdao-Changzhou	0.48	15.1	33.2	120.2
Summer 2003							
Su1	8-Aug-03	07:08~11:18	Changzhou-Shashi	2.35	19.3	30.8	114.3
Su2	21-Aug-03	08:38~10:51	Shashi (L) ^a	2.68	10.3	30.4	112.3
Su3	21-Aug-03	10:58~12:34	Shashi (L)	0.89	7.4	30.4	112.3
Su4	23-Aug-03	08:45~11:33	Shashi (O) ^a	2.31	13.0	30.1	112.2
Su5	23-Aug-03	11:38~13:11	Shashi (O)	0.85	7.2	30.1	112.2
Su6	26-Aug-03	08:53~12:33	Shashi-Jiangbei	2.97	17.0	30.0	109.2
Su7	4-Sep-03	08:30~09:58	Xinjin (L)	2.72	6.8	29.6	103.7

Su8	4-Sep-03	10:02~11:33	Xinjin (O)	1.36	7.0	29.6	103.6
Su9	5-Sep-03	08:48~11:13	Xinjin (O)	2.57	11.2	30.1	103.3
Su10	5-Sep-03	11:17~12:47	Xinjin (O)	1.56	7.0	30.1	103.3
Su11	10-Sep-03	10:11~15:16	Xinjin- Shashi	2.78	23.6	30.2	107.6
Su12	11-Sep-03	08:56~13:43	Shashi- Changzhou	2.69	22.2	31.0	115.8
Su13	13-Sep-03	12:37~14:47	Changzhou (O)	2.42	10.1	31.4	119.5
Su14	13-Sep-03	15:00~16:35	Changzhou (O)	0.84	7.4	31.4	119.5
Spring 2004							
Sp1	19-May-04	02:30~06:35	Changzhou- Yichang	2.14	19.0	31.0	115.6
Sp2	20-May-04	01:12~04:26	Yichang- Xinjin	2.99	15.1	30.1	107.4
Sp3	21-May-04	01:29~03:47	Xinjin (L)	2.36	10.7	30.0	105.0
Sp4	21-May-04	03:57~05:16	Xinjin (L)	1.34	6.1	30.2	105.3
Sp5	27-May-04	00:07~02:08	Xinjin (O)	2.65	9.3	30.1	104.8
Sp6	27-May-04	02:12~03:34	Xinjin (O)	1.37	6.4	30.1	105.0
Sp7	28-May-04	04:29~08:10	Xinjin- Yichang	3.26	17.1	30.2	107.2
Sp8	30/31- May-04	23:56~02:04	Yichang (O)	2.41	9.8	30.1	112.1
Sp9	31-May-04	02:08~03:28	Yichang (O)	0.92	6.2	30.1	112.2
Sp10	31-May-04	17:24~18:58	Yichang (L)	2.66	7.3	30.4	112.2
Sp11	31-May-04	19:04~20:19	Yichang (L)	0.83	5.8	30.5	112.3
Sp12	7-Jun-04	01:02~04:11	Yichang- Changzhou	2.61	14.7	30.9	115.2
Sp13	9-Jun-04	03:54~05:44	Changzhou (O)	1.26	8.5	31.8	119.2
Sp14	9-Jun-04	05:48~07:05	Changzhou (O)	2.62	5.9	31.8	119.2
Sp15	10-Jun-04	01:37~03:41	Changzhou (L)	2.50	9.6	32.1	119.4
Sp16	10-Jun-04	03:45~05:28	Changzhou (L)	0.79	8.0	32.1	119.4

23 ^aThe hovering flights over local cities were named as O-shaped (O) flight and shown as

24 circles in Figure 1, whereas flights over local cities were named as L-shaped flight (L).