

Supplementary Material

Organic Aerosol Components observed in Northern Hemispheric Datasets from Aerosol Mass Spectrometry

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Table S1: Summary of the location, time, duration, and previous publications of the AMS datasets that are analyzed in this study, Zhang et al. (2007a) and Jimenez et al. (2009).
 Note: Site type 1 = urban, Site type 2 = urban downwind/rural/remote.

| Location | Field Campaign | Site type | Time Period | Duration | Season | Previous Publications |
|---------------------|----------------|-----------|-------------------------|----------|--------|---|
| Boulder, CO, USA | BFS | 1 | 6/7/2003 - 6/20/2003 | 14 days | Su | Nemitz et al.(2008) |
| New York City, USA | PMTACS | 1 | 1/7/2004 - 2/6/2004 | 30 days | W | Weimer et al. (2006) |
| Manchester, UK | | 1 | 1/17/2002 - 1/28/2002 | 11 days | W | Allan et al. (2003a; 2003b) |
| Riverside, CA, USA | SOAR-1 | 1 | 7/14/2005 - 8/13/2005 | 30 days | Su | DeCarlo et al. (2006), Docherty et al. (2008), Cubison et al. (2008) |
| Tokyo, Japan | | 1 | 7/23/2003 - 8/14/2003 | 23 days | Su | Takegawa et al. (2005; 2006) |
| Beijing, China | | 1 | 7/9/2006 - 7/21/2006 | 12 days | Su | Sun et al. (2009) |
| Zurich, Switzerland | | 1 | 7/14/2005 - 8/4/2005 | 21 days | Su | Lanz et al. (2007) |
| Pittsburgh, PA, USA | PAQS | 1 | 9/6/2002 - 9/22/2002 | 15 days | F | Zhang et al. (2004; 2005a; 2005b; 2005c; 2007b) Ulbrich et al. (2009) |
| Mexico City, Mexico | MILAGRO | 1 | 3/10/2006 - 3/30/2006 | 21 days | Sp | Aiken et al. (2008; 2009) |
| Tokyo, Japan | | 1 | 1/20/2004 - 2/10/2004 | 20 days | W | Takegawa et al. (2005; 2006) |
| Vancouver, Canada | PACIFIC-2001 | 1 | 8/11/2001 - 8/24/2001 | 13 days | Su | Boudries et al. (2004), Alfarra et al. (2004) |
| New York City, USA | PMTACS | 1 | 6/30/2001 - 8/5/2001 | 36 days | Su | Drewnick et al. (2004a; 2004b) |
| Edinburgh, UK | | 1 | 10/31/2000 - 11/10/2000 | 10 days | F | Allan et al. (2003a; 2003b) |
| Mainz, Germany | | 1 | 9/16/2004 - 10/1/2004 | 15 days | F | Vester et al. (2007) |

| | | | | | | |
|--|-----------------|---|---|---------|---------|--|
| Houston, TX, USA | TexAQS- 2000 | 1 | 8/15/2000 - 9/15/2000 | 31 days | Su - F | Tanaka et al.(2003) |
| Manchester, UK | | 1 | 6/14/2001 - 6/25/2001 | 11 days | Su | Allan et al. (2003a; 2003b) |
| Duke Forest, NC, USA | | 2 | 9/13/2004 - 9/21/2004 | 7 days | F | |
| Hyytiälä, southern Finland | QUEST | 2 | 3/19/2003 - 4/13/2003 | 25 days | Sp | Allan et al. (2006) |
| Chelmsford, UK | TORCH-1 | 2 | 7/29/2003 - 8/31/2003 | 33 days | Su | Cubison et al. (2006) |
| Taunus, Germany | | 2 | 7/14/2004 - 8/4/2004 | 21 days | Su | Dusek et al. (2006), Hings et al., (2007) |
| Cruise track along East coast of USA, Leg1 | NEAQS1 | 2 | 7/18/2002 - 7/26/2002; 7/29/2002 - 8/10/2002 | 21 days | Su | De Gouw et al. (2005), Marcolli et al. (2006), Bates et al. (2005) |
| Thompson Farm, NH, USA | | 2 | 7/9/2005 - 8/15/2005 | 38 days | Su | Cottrell et al. (2008) |
| Cruise track along East coast of USA, Leg2 | NEAQS2 | 2 | 7/29/2002 - 8/10/2002 | 13 days | Su | De Gouw et al. (2005), Marcolli et al. (2006), Bates et al. (2005) |
| Pinnacle State Park, NY, USA | | 2 | 7/14/2004 - 8/5/2004 | 22 days | Su | Bae et al. (2006) |
| Fukue Island, Japan | | 2 | 3/18/2003 - 4/3/2003 | 16 days | Sp | Takami et al. (2005) |
| Fukue Island, Japan | | 2 | 4/3/2003 - 4/16/2003 | 13 days | Sp | Takami et al. (2005) |
| Fukue Island, Japan | | 2 | 5/10/2003 - 6/3/2003 | 24 days | Sp - Su | Takami et al. (2005) |
| Chebogue Pt., Nova Scotia, Canada | ICARTT | 2 | 7/7/2004 - 8/14/2004 | 38 days | Su | Williams et al. (2007) |
| North Norfolk Coastline | TORCH-2 | 2 | 4/25/200- 5/26/2004 | 31 days | Sp | Gysel et al. (2007) |
| Okinawa Island, Japan | | 2 | 10/3/2003 - 10/28/2003 | 25 days | F | Miyoshi et al. (2009) |
| Okinawa Island, Japan | | 2 | 10/28/2003 - 12/2/2003 | 35 days | F - W | Miyoshi et al. (2009) |
| Okinawa Island, Japan | | 2 | 12/2/2003 - 12/24/2003 | 22 days | W | Miyoshi et al. (2009) |

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|--------------------------|----------|---|-----------------------------|---------|----|-----------------------|
| Okinawa Island, Japan | | 2 | 3/13/2004 - 4/8/2004 | 26 days | Sp | Miyoshi et al. (2009) |
| Okinawa Island, Japan | | 2 | 4/8/2004 - 4/27/2004 | 19 days | Sp | Miyoshi et al. (2009) |
| Cheju Island, Korea | ACE-Asia | 2 | 4/11/2001 - 4/30/2001 | 19 days | Sp | Topping et al. (2004) |

Table S2: Summary of the location, time, and previous publications of the AMS datasets in Lanz et al. (2009) and from other sites (Crete and Egbert). Note: Site type 1 = urban, Site type 2 = urban downwind/rural/remote.

| Location | Site type | Time Period | Season | Previous Publications |
|--|-----------|--|--------|---------------------------|
| Rhine Valley, Switzerland, Austria, Liechtenstein | 2 | 2/16/2007- 2/22/2007;2/8/2008- 2/13/2008 | Wi | Weimer et al. (2009) |
| Zurich , Switzerland | 1 | 1/6/2006-1/25/2006 | Wi | Lanz et al. (2008) |
| Grenoble, France | 1 | 1/14/2009-1/30/2009 | Wi | Favez et al. (2009) |
| Massongex, Switzerland | 2 | 11/23/2006- 12/17/2006 | Wi | Perron et al. (2010) |
| Harkingen, Switzerland | 2 | 5/12/2005-5/30/2005 | Sp | |
| Reiden, Switzerland | 2 | 1/27/2006-2/13/2006 | Wi | |
| Roveredo, Switzerland | 2 | 3/1/2005-3/15/2005 | Sp | Alfarra et al. (2007) |
| Roveredo, Switzerland | 2 | 11/25/2005- 12/15/2005 | Wi | Alfarra et al. (2007) |
| Payerne, Switzerland | 2 | 5/31/2006-7/3/2006 | Su | |
| Payerne, Switzerland | 2 | 1/12/2007-2/17/2007 | Wi | |
| Hohenpeissenberg, Germany | 2 | 5/19/2002-5/31/2002 | Su | Hock et al. (2008) |
| Jungfrauoch, Switzerland | 2 | 4/30/2008-5/29/2008 | Sp | |
| Finakolia (Crete), Greece | 2 | 5/8/2009-6/5/2009 | Su | Hildebrandt et al. (2009) |
| Egbert, Canada | 2 | 5/14/2007-6/15/2007 | Su | Slowik et al. (2009) |

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