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EDUCATION

Ph.D. – Marine and Atmospheric Chemistry, Rosenstiel School of Marine and Atmospheric Science, *University of Miami*, Miami, FL, 1999

B.Sc. – Chemical Engineering, *Bogazici University*, Istanbul, Turkey, 1993

PROFESSIONAL PREPARATION

Postdoctoral (2000 - 2002) – Atmospheric Chemistry, Department of Earth System Science, *University of California, Irvine*, CA

Postdoctoral (1999 - 2000) – Rosenstiel School of Marine and Atmospheric Science, *University of Miami*, Miami, FL

APPOINTMENTS

Associate Researcher (July 2010 – present) – Atmospheric Chemistry, Department of Earth System Science, *University of California, Irvine*, CA

Assistant Researcher (July 2002 – July 2010) – Atmospheric Chemistry, Department of Earth System Science, *University of California, Irvine*, CA

FIELD EXPERIENCE

Antarctica (South Pole, Dec 2008 – Jan 2009): PI on an expedition for firn air sampling.

Antarctica (West Antarctic Ice Sheet Divide, Dec 2005 – Jan 2006): co-PI on an expedition for firn air sampling and drilling shallow ice cores.

North Pacific research cruise (May 2004 – July 2004): Measurements of air-sea fluxes of trace gases. Chief scientist on 2nd leg.

Indian Ocean (Jun 1996 – Aug 1996): Measurements of tritium and helium-3 in surface and deep ocean. Participated as a graduate student.

TEACHING EXPERIENCE

Data analysis for climate sciences (ESS 116 – 3 units, undergraduate), Department of Earth System Science, University of California, Irvine, 2005.

PUBLICATIONS

Battle, M. O., J. P. Severinghaus, E. D. Sofen, D. Plotkin, A. J. Orsi, M. Aydin, S. A. Montzka, T. Sowers, and P. Tans (in review 2011), Controls on the movement and composition of firn air at the West Antarctic Ice Sheet Divide, *Atmos. Chem. Phys. Dis.*, 11, 18633-18675, www.atmos-chem-phys-discuss.net/11/18633/2011/.

Aydin, M., K. R. Verhulst, E. S. Saltzman, M. O. Battle, S. A. Montzka, D. R. Blake, Q. Tang, and M. J. Prather (2011), Recent decreases in fossil-fuel

- emissions of ethane and methane derived from firn air, *Nature*, 476, 198-201.
- Aydin, M., S. A. Montzka, M. O. Battle, M. B. Williams, W. De Bruyn, J. H. Butler, K. R. Verhulst, C. Tatum, B. K. Gun, D. A. Plotkin, B. D. Hall, and E. S. Saltzman (2010), Post-coring entrapment of modern air in polar ice: Evidence from CFC-12 measurements in Antarctic firn air and shallow ice cores, *Atmos. Chem. Phys.*, 10, 5135-5144, www.atmos-chem-phys.net/10/5135/2010, doi:10.5194/acpd-10-5135-2010.
- Montzka, S. A., B. Miller, M. O. Battle, M. Aydin, K. Verhulst, E. Saltzman, D. Fahey, and L. Kuijpers (2010), Recent increases in global HFC-23 emissions, *Geophys. Res. Lett.*, 37, L02808, doi:10.1029/2009GL041195.
- Saltzman, E. S., M. Aydin, M. B. Williams, K. R. Verhulst, and B. Gun (2009), Methyl Chloride in a deep ice core from Siple Dome, Antarctica, *Geophys. Res. Lett.*, 36, L03822, doi:10.1029/2008GL036266.
- Aydin, M., M. B. Williams, C. Tatum, and E. S. Saltzman (2008), Carbonyl sulfide in air extracted from a South Pole ice core: a 2,000 year record, *Atmos. Chem. Phys.*, 8, 7533-7542, www.atmos-chem-phys.net/8/7533/2008.
- Saltzman, E. S., M. Aydin, C. Tatum, and M. B. Williams (2008), 2,000-year record of atmospheric methyl bromide from a South Pole ice core, *J. Geophys. Res.*, 113, D05304, doi:10.1029/2007JD008919.
- Aydin, M., M. B. Williams, and E. S. Saltzman (2007), Feasibility of reconstructing paleoatmospheric records of selected alkanes, methyl halides, and sulfur gases from Greenland ice cores, *J. Geophys. Res.*, 112, D07312, doi:10.1029/2006JD008027.
- Butler, J. H., D. B. King, J. M. Lobert, S. A. Montzka, S. A. Yvon-Lewis, B. D. Hall, N. J. Warwick, D. J. Mondeel, M. Aydin, and J. W. Elkins (2007), Oceanic distributions and emissions of short-lived halocarbons, *Glob. Biogeochem. Cycl.*, 21, GB1023, doi:10.1029/2006GB002732.
- Williams, M. B., M. Aydin, C. Tatum, and E. S. Saltzman (2007), A 2000 year atmospheric history of methyl chloride from a South Pole ice core: Evidence for climate-controlled variability, *Geophys. Res. Lett.*, 34, L07811, doi:10.1029/2006GL029142.
- Aydin, M., Z. Top, and D. B. Olson (2004), Exchange processes and watermass exchange along the subarctic front in the North Pacific: Oxygen consumption rates and net carbon flux, *Journal of Marine Research*, Vol. 62-2.
- Montzka, S. A., M. Aydin, J. H. Butler, M. Battle, E. S. Saltzman, B. D. Hall, A. D. Clark, D. Mondeel, and J. W. Elkins (2004), A 350 year history for carbonyl sulfide inferred from Antarctic firn air and air trapped in ice, *J. Geophys. Res.*, Vol. 109, D22302, doi:10.1029/2004JD004686.
- Saltzman, E. S., M. Aydin, W. J. De Bruyn, D. B. King, and S. A. Yvon-Lewis (2004), Methyl bromide in preindustrial air: measurements from an Antarctic ice core, *J. Geophys. Res.*, Vol. 109, No. D5, D0530 10.1029/2003JD004157.
- Aydin, M., E. S. Saltzman, W. J. De Bruyn, S. A. Montzka, J. H. Butler, and M. Battle (2004), Atmospheric variability of methyl chloride over the last 300 years from an Antarctic ice core and firn air, *Geophys. Res. Lett.*, Vol. 31, L02109, doi:10.1029/2003GL018750.
- Rhew, R. C., M. Aydin, E. S. Saltzman (2003), Measuring terrestrial fluxes of

methyl chloride and methyl bromide using a stable isotope technique, *Geophys. Res. Lett.*, 30, 2013-2016, doi:10.1029/2003GL018750.

Aydin, M., W. J. De Bruyn, E. S. Saltzman (2002), Preindustrial atmospheric carbonyl sulfide (OCS) from an Antarctic ice core, *Geophys. Res. Lett.*, 2, Art. no. 1359.

Aydin, M. (1999), Modification of waters in the northeastern subpolar Pacific, doctoral dissertation, 162 pp., University of Miami.

Aydin, M., Z. Top, R. A. Fine, D. B. Olson (1998), Modification of the intermediate waters in the Northeast subpolar Pacific, *J. Geophys. Res.*, 103(C13), 30923-30940.

GRANTS

Recipient of a 3-year research grant from the National Science Foundation as a PI: "Carbonyl sulfide measurements in the deep West Antarctic Ice Sheet Divide ice core", 2011.

Recipient of a 2-year research grant from the National Science Foundation as the PI: "Collaborative research: Methane isotopes and light alkanes in South Pole firn air", 2008.

Recipient of a 3-year research grant from the National Science Foundation as a co-PI: "Methyl halides and sulfur gases in deep Antarctic ice cores", 2007.

Recipient of a 3-year collaborative research grant from the National Science Foundation as a co-PI: "Collaborative research: Gases in firn air and in shallow ice at the proposed WAIS-D drilling site", 2005.

Recipient of a 3-year research grant from the National Science Foundation as a co-PI: "Methyl chloride and methyl bromide in Antarctic ice cores", 2004.