3.3. REFERENCES

Arnott, W.P., H. Moosmüller, C.F. Rogers, T. Jin, and R. Bruch, Photoacoustic spectrometer for measuring light absorption by aerosol: Instrument description, *Atmos. Environ., 33*, 2845-2852, 1999.

Barrie, L.A., Occurrence and trends of pollution in the Arctic troposphere, in *Chemical Exchange Between the Atmosphere and Polar Snow*, edited by E.W. Wolff and R.C. Bales, *NATO ASI Series I, 43*, pp. 93-129, Springer-Verlag, Berlin, 1996.

Bergin, M.H., E.A. Meyerson, J.E. Dibb, and P.A. Mayewski, Relationship between continuous aerosol measurements and firn core chemistry over a 10-year period at the South Pole, *Geophys. Res. Lett., 25,* 1189-1192, 1998.

Bergin, M.H., R.S. Halthorne, S.E. Schwartz, J.A. Ogren, and S. Nemesure, Comparison of aerosol column properties based on nephelometer and radiometer measurements at the SGP ARM site, *J. Geophys. Res., 105*, 6807-6818, 2000.

Bird, R.E., and C. Riordan, Simple solar spectral model for direct and diffuse irradiance on horizontal and tilted planes at the Earth's surface for cloudless atmospheres, *J. Appl. Meteorol., 25,* 87-97, 1986.

Bishop, J.K, W.B. Rossow, and E.G. Dutton, Surface solar irradiance from the International Satellite Cloud Climatology Project 1983-1991, *J. Geophys. Res., 102,* 6883-6910, 1997.

Bodhaine, B.A., Barrow surface aerosol: 1976-1987, *Atmos. Environ., 23*, 2357-2369, 1989.

Bodhaine, B.A., The U. S. aerosol monitoring program in Antarctica, Proc. *4th Workshop Italian Research on Antarctic Atmosphere*, Porano, Italy, Oct. 21-23, 1991, edited by M. Colacino, G. Giovanelli, and L. Stefanutti, pp. 15-25, Ital. Phys. Soc., Bologna, Italy, 1992.

Bodhaine, B.A., Aerosol absorption measurements at Barrow, Mauna Loa, and South Pole, *J. Geophys. Res., 100*, 8967-8975, 1995.

Bodhaine, B.A., Central Antarctica: Atmospheric chemical composition and atmospheric transport, in *Chemical Exchange Between the Atmosphere and Polar Snow*, edited by E.W. Wolff and R.C. Bales, *NATO ASI Series I, 43,* pp. 145-172, Springer-Verlag, Berlin, 1996.

Bodhaine, B.A., and J.J. DeLuisi, An aerosol climatology of Samoa, *J. Atmos. Chem., 3*, 107-122, 1985.

Bodhaine, B.A., and E.G. Dutton, A long-term decrease in Arctic haze at Barrow, Alaska, *Geophys. Res. Lett., 20,* 947-950, 1993.

Bodhaine, B.A., B.G. Mendonca, J.M. Harris, and J.M. Miller, Seasonal variation in aerosols and atmospheric transmission at Mauna Loa Observatory, *J. Geophys. Res., 88,* 6769-6772, 1981.

Bodhaine, B.A., J.J. DeLuisi, J.M. Harris, P. Houmere, and S. Bauman, Aerosol measurements at the South Pole, *Tellus, 38B,* 223-235, 1986.

Bodhaine, B.A., J.J. DeLuisi, J.M. Harris, P. Houmere, and S. Bauman, PIXE analysis of South Pole aerosol, in *Nuclear Instruments and Methods in Physics Research, B22*, pp. 241-247, Elsevier, Holland, 1987.

Bodhaine, B.A., J.M. Harris, and J.A. Ogren, Aerosol optical properties at Mauna Loa Observatory: Long-range transport from Kuwait?, *Geophys. Res. Lett., 19*, 581-584, 1992.

Bodhaine, B.A., R.L. McKenzie, P.V. Johnston, D.J. Hofmann, E.G. Dutton, R.C. Schnell, J.E. Barnes, S.C. Ryan, and M. Kotkamp, New ultraviolet spectroradiometer measurements at Mauna Loa Observatory, *Geophys. Res. Lett., 23,* 2121-2124, 1996.

Bodhaine, B.A., E.G. Dutton, D.J. Hofmann, R.L. McKenzie, and P.V. Johnston, UV measurements at Mauna Loa: July 1995 to July 1996, *J. Geophys. Res., 102,* 19,265-19,273, 1997.

Bodhaine, B.A., E.G. Dutton, R.L. McKenzie, and P.V. Johnston, Calibrating broadband UV instruments: Ozone and solar zenith angle dependence, *J. Atmos. Oceanic Technol., 15,* 916-926, 1998.

Bodhaine, B.A., N.B. Wood, E.G. Dutton, and J.R. Slusser, On Rayleigh optical depth calculations, *J. Atmos. Oceanic Technol., 16,* 1854-1861, 1999.

Bond, T.C., T.L. Anderson, and D. Campbell, Calibration and intercomparison of filter-based measurements of visible light absorption by aerosol, *Aerosol Sci. Technol., 30*, 582-600, 1999.

Bush, B.C., F.P.J. Valero, A.S. Simpson, and L. Bignone, Characterization of thermal effects in pyranometers: A data correction algorithm for improved measurement of surface insolation, *J. Atmos. Oceanic Technol., 17,* 165-175, 1999.

Cacciari, A., A. Lupi, C. Tomasi, V. Viatale, and S. Marani, Calculation of the radiative forcing caused by aerosol particles in Antarctic regions (Terra Nova Bay), *Proc. 8th Workshop Italian Research on Antarctic Atmosphere,* Bologna, Italy, Oct. 20-22, 1999, edited by M. Colacino and G. Giovanelli, pp. 455-467, Ital. Phys. Soc., Bologna, Italy, 2000.

Cachier, H., M.P. Brémond, and P. Buat-Ménard, Determination of atmospheric soot carbon with a simple thermal method, *Tellus, 41B*, 379-390, 1989.

Charlson, R.J., S.E. Schwartz, J.M. Hales, R.D. Cess, J.A. Coakley, J.E., Hansen, and D.J. Hofmann, Climate forcing by anthropogenic aerosols, *Science, 255*, 423-420, 1992.

Chow, J.C., J.G. Watson, L.C. Pritchett, W.R. Pierson, C.A. Frazier, and R.G. Purcell, The DRI thermal/optical reflectance carbon analysis system: Description, evaluation and applications in US air quality studies, *Atmos. Environ., 17A*, 1185-1201, 1993.

Delene, D.J., and J.A. Ogren, Variability of aerosol optical properties at four North American surface monitoring sites, *J. Atmos. Sci.*, *59*, 1135-1150, 2002.

Dutton, E.G., An extended comparison between Lowtran7-computed and observed broadband thermal irradiances: Global extreme and intermediate surface conditions, *J. Atmos. Oceanic Technol., 10,* 326-336, 1993.

Dutton, E.G., and B.A. Bodhaine, Solar irradiance anomalies caused by clear-sky transmission variations above Mauna Loa: 1958-99, *J. Clim., 14,* 3255-3262, 2001.

Dutton, E.G., and J.R. Christy, Solar radiative forcing at selected locations and evidence for global lower tropospheric cooling following the eruptions of El Chichón and Pinatubo, *Geophys. Res. Lett., 19,* 2313-2316, 1992.

Dutton, E.G., and D.J. Endres, Date of snow melt at Barrow, Alaska, USA, *Arctic Alpine Res., 23*, 115-119, 1991.

Dutton, E.G., J.J. DeLuisi, and B. Bodhaine, Features of aerosol optical depth observed at Barrow, March 10-20, 1983, *Geophys, Res. Lett., 11,* 385-388, 1984.

Dutton, E.G., J.J. DeLuisi, and A.P. Austring, Interpretation of Mauna Loa atmospheric transmission relative to aerosols, using photometric precipitable water amounts, *J. Atmos. Chem., 3*, 53-68, 1985.

Dutton, E.G., J.J. DeLuisi, and G.A. Herbert, Shortwave aerosol optical depth of Arctic haze measured on board the NOAA WP-3D during AGASP-II, April 1986, *J. Atmos. Chem., 9*, 71-79, 1989.

Dutton, E.G., J.J. Michalsky, T. Stoffel, B.W. Forgan, J. Hickey, D. W. Nelson, T.L. Alberta, and I. Reda, Measurement of broadband diffuse solar irradiance using current commercial instrumentation with a correction for thermal offset errors, *J. Atmos. Oceanic Technol., 18,* 297-314, 2001.

Ellis, H.T., and R.F. Pueschel, Solar radiation: Absence of air pollution trends at Mauna Loa, *Science, 172,* 845-846, 1971.

Harris, J.M., and J.D.W. Kahl, Analysis of 10-day isentropic flow patterns for Barrow, Alaska: 1985-1992, *J. Geophys. Res., 99,* 25,845-25,855, 1994.

Hofmann, D.J., and J.M. Rosen, On the prolonged lifetime of the El Chichón sulfuric acid aerosol cloud*, J. Geophys. Res., 92,* 9825-9830, 1987.

Hofmann, D.J., J.T. Peterson, and R.M. Rosson (Eds.), *Climate Monitoring and Diagnostics Laboratory No. 23 Summary Report 1994-1995,* 161 pp., NOAA Environ. Res. Labs., Boulder, CO, 1996.

Hofmann, D.J., J.T. Peterson, and R.M. Rosson (Eds.), *Climate Monitoring and Diagnostics Laboratory Summary Report No. 24*

1996-1997, 166 pp., NOAA Environ. Res. Labs., Boulder, CO, 1998.

Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.I. van der Linden, and D. Xiaosu (Eds.), *Climate Change 2001: The Scientific Basis: Contribution of Working Group I to the Intergovernmental Panel on Climate Change (IPCC)*, 944 pp., Cambridge Univ. Press, New York, 2001.

Key, J.R., A.J. Schweiger, and R.S. Stone, Expected uncertainty in satellite-derived estimates of surface radiation budget at high latitudes*, J. Geophys. Res., 102*, 15,837-15,847, 1997.

King, M.D., D.M. Byrne, B.M. Herman, and J.A. Reagan, Aerosol size distributions obtained by inversion of spectral optical depth measurements, *J. Atmos. Sci., 35,* 2153-2167, 1978.

Lawrimore, J.H., M.S. Halpert, G.D. Bell, M.J. Menne, B. Lyon, R.C. Schnell, K.L. Gleason. D.R. Easterling, W. Thiaw, W.J. Wright, R.R. Heim Jr., D.A. Robinson, and L. Alexander, Climate Assessment for 2000, *Bull. Am. Meteorol. Soc.*, *82(6)*, S1-S55, 2001.

MacLaughlin, J.A., R.R. Anderson, and M.F. Holick, Spectral character of sunlight modulates photosynthesis of previtamin D_3 and its photoisomers in human skin, *Science, 216,* 1001-1003, 1982.

Madronich, S., The atmosphere and UV-B radiation at ground level, in *Environmental UV Photobiology,* edited by A.R. Young, L.O. Bjorn, J. Moan, and W. Nultsch, pp. 1-39, Plenum Press, New York, 1993.

McInnes, L.M., M.H. Bergin, J.A. Ogren, and S.E. Schwartz, Differences in hygroscopic growth between marine and anthropogenic aerosol, *Geophys. Res. Lett., 25*, 513-516, 1998.

McKenzie, R.L., P.V. Johnston, M. Kotkamp, A. Bittar, and J.D. Hamlin, Solar ultraviolet spectroradiometry in New Zealand: Instrumentation and sample results from 1990, *Appl. Opt., 31,* 6501-6509, 1992.

McKenzie, R.L., P.V. Johnston, D. Smale, B.A. Bodhaine, and S. Madronich, Altitude effects on UV spectral irradiance deduced from measurements at Lauder, New Zealand, and at Mauna Loa Observatory, Hawaii, *J. Geophys. Res., 106*, 22,845-22,860, 2001.

McKinlay, A.F., and B.L. Diffey, A reference action spectrum for ultraviolet induced erythema in human skin, *J. Int. Comm. Illum., 6,* 17-22, 1987.

Mertes, S., B. Dippel, and A. Schwarzenböck, Comparison of the Particle Soot Absorption Photometer (PSAP) absorption measurement to graphitic carbon quantification on the PSAP internal filters, *Aerosol Sci. Technol*., in press, 2002.

Michalsky, J., E.G. Dutton, M. Rubes, D. Nelson, T. Stoffel, M. Wesley, M. Splitt, and J. Deluisi, Optimal measurement of surface shortwave irradiance using current instrumentation, *J. Atmos. Oceanic Technol., 16,* 55-69, 1999.

Morrison, J., et al., Study of Environmental Arctic Change (SEARCH) Science Plan, 2001 (available at http://psc.apl.washington.edu/search), 2001.

Myneni, R.B., C.D. Keeling, C.J. Tucker, G. Asrar, and R.R. Nemani, Increased plant growth in the northern high latitudes from 1981 to 1991, *Nature, 386*, 698-702, 1997.

Nelson, D.W., The NOAA Climate Monitoring and Diagnostics Laboratory Solar Radiation Facility, *NOAA TM OAR CMDL-15*, 36 pp., NOAA Clim. Monit. and Diag. Lab., Boulder, CO, 2000.

NRC (National Research Council), *Aerosol Radiative Forcing and Climatic Change*, 161 pp., National Academy Press, Washington, DC, 1996.

Oechel, W.C., G.L. Vourlitis, S.J. Hastings, and S.A. Bochkrez, Effects of Arctic CO_2 flux over two decades: Effects of climate change at Barrow, Alaska, *Ecol. Appl., 5*, 846-855, 1995.

Ogren, J.A., A systematic approach to in situ observations of aerosol properties, in *Aerosol Forcing of Climate*, edited by R.J. Charlson and J. Heintzenberg, pp. 215-226, Wiley, New York, 1995.

Ohmura, A., H. Gilgen, H. Hegner, G. Müller, M. Wild, E.G. Dutton, B. Forgan, C. Fröhlich, R. Philipona, A. Heimo, G. Konig-Langlo, B. McArthur, R. Pinker, C.H. Whitlock, and K. Dehne, Baseline Surface Radiation Network (BSRN)/WCRP: New precision radiometry for climate research, *Bull. Am. Meteorol. Soc., 79,* 2115- 2136, 1998.

Philipona, R., C. Fröhlich, K. Dehne, J. DeLuisi, J. Augustine, E. Dutton, D. Nelson, B. Forgan, P. Novotny, J. Hickey, S.P. Love, S. Bender, B. McArthur, A. Ohmura, J.H. Seymour, J.S. Foot, M. Shiobara, F.P.J. Valero, and A.W. Strawa, The BSRN pyrgeometer round-robin calibration experiment, *J. Atmos. Oceanic Technol., 15,* 687-696, 1998.

Philipona, R.C., E.G. Dutton, T. Stoffel, J. Michalsky, I. Reda, A. Stifter, P. Wendling, N. Wood, S.A. Clough, E.J. Mlawer, G. Anderson, H.E. Revercomb, and T.R. Shippert, Atmospheric longwave irradiance uncertainty: Pyrgeometers compared to an absolute sky-scanning radiometer, AERI, and radiative transfer model calculations, *J. Geophys. Res., 106*, 28,129-28,141, 2001.

Quakenbush, T.K., and B.A. Bodhaine, Surface aerosols at the Barrow GMCC observatory: Data from 1976 through 1985, *NOAA Data Rep. ERL ARL-10*, 230 pp., NOAA Air Resources Lab., Silver Spring, MD, 1986.

Quinn, P.K., T.L. Miller, T.S. Bates, J.A. Ogren, E. Andrews, and G.E. Shaw, A three-year record of simultaneously measured aerosol chemical and optical properties at Barrow, Alaska, *J. Geophys. Res.*, in press, 2002.

Radke, L.F., C.A. Brock, R.J. Ferek, and D.J. Coffman, Summertime Arctic hazes, *Eos Trans. AGU, 71*(43), 1264, 1990.

Ramanathan, V., et al., Indian Ocean Experiment: An integrated analysis of the climate forcing and effects of the great Indo-Asian haze, *J. Geophys. Res., 106*, 28,371-28,398, 2001.

Remer, L.A., and Y.J. Kaufman, Dynamic aerosol model: Urban/industrial aerosol, *J. Geophys. Res., 103*, 13,859-13,871, 1998.

Schnell, R.C., D.B. King, and R.M. Rosson, (Eds.), *Climate Monitoring and Diagnostics Laboratory Summary Report No. 25 1998-1999,* 154 pp., NOAA Environ. Res. Labs., Boulder, CO, 2001.

Serreze, M.C., J.E. Walsh, F.S. Chapin III, T. Osterkamp, M. Dyurgerov, V. Romanovsky, W.C. Oechel, J. Morrison, T. Zhang, and R.G. Barry, Observational evidence of recent change in the northern high-latitude environment, *Clim. Change, 46*, 159-207, 2000.

Sheridan, P.J., D.J. Delene, and J.A. Ogren, Four years of continuous surface aerosol measurements from the DOE/ARM Southern Great Plains CART site, *J. Geophys. Res., 106*, 20,735-20,747, 2001.

Stone, R.S., Variations in Western Arctic temperatures in response to cloud radiative and synoptic-scale influences, *J. Geophys. Res., 102*, 21,769-21,776, 1997.

Stone, R.S., Climate monitoring at Barrow, Alaska, and South Pole: An overview of U.S. studies of polar surface radiation balance and aerosols, *Proc. 8th Workshop Italian Research on Antarctic Atmosphere*, Bologna, Italy, Oct. 20-22, 1999, edited by M. Colacino and G. Giovanelli, pp. 83-98, Ital. Phys. Soc., Bologna, Italy, 2000.

Stone, R.S., Factors that determine when the seasonal snowmelt occurs in Northern Alaska, *Proc. 2nd Wadati Conf. on Global Change and the Polar Climate*, Tsukuba, Japan, March 7-9, 2001, pp. 87-90, 2001.

Stone, R.S., Monitoring aerosol optical depth at Barrow, Alaska, and South Pole: Historical overview, recent results, and future goals, *Proc. 9th Workshop Italian Research on Antarctic Atmosphere*, Rome, Italy, Oct. 22-24, 2001, Ital. Phys. Soc., Bologna, Italy, in press, 2002.

Stone, R.S., J. Key, and E. Dutton, Properties and decay of stratospheric aerosols in the Arctic following the 1991 eruptions of Mount Pinatubo, *Geophys. Res. Lett., 20,* 2359-2362, 1993.

Stone, R.S., E.G. Dutton, and J.R. Key, Properties and decay of Pinatubo aerosols in polar regions compared with tropical observations*, Proc. 8th Conf. on Atmospheric Radiation,* Nashville, TN, Jan. 23-28, 1994, pp. 432-434, Am. Meteorol. Soc., Boston, 1994.

Stone, R.S., E.G. Dutton, J.M. Harris, and D. Longenecker, The advancing date of spring snowmelt in the Alaskan Arctic, *Proc. 11th ARM Science Team Meeting*, Atlanta, GA, March 19-23, 2001 (available at http://www.arm.gov/docs/documents/technical/conf_0103/stone-rs.pdf), 2001.

Stone, R.S, E.G. Dutton, J.M. Harris, and D. Longenecker, Earlier spring snowmelt in northern Alaska as an indicator of climate change, *J. Geophys. Res.,* in press, 2002.

Whitlock, C.H., T.P. Charlock, W.F. Staylor, R.T. Pinker, I. Laszlo, A. Ohmura, H. Gilgen, T. Konzelman, R.C. DePasquale, C.D. Moast. S.R. LeCroy, and N.A. Ritchey, First global WCRP shortwave surface radiation budget dataset, *Bull. Am. Meteorol. Soc., 76,* 905-922, 1995.