REFERENCES

CHAPTER 1 REFERENCES

Acuna-Soto, R., D.W. Stahle, M.K. Cleaveland, and M.D. Therrell, 2002: Megadrought and megadeath in 16th century Mexico. *Emerging Infectious Diseases*, **8(4)**, 360-362.

Allen, C.D. and D.D. Breshears, 1998: Drought-induced shift of a forest–woodland ecotone: eapid landscape response to climate variation. *Proceedings of the National Academies of Science*, **95(25)**, 14839-14842.

Andreadis, K.M. and D.P. Lettenmaier, 2006: Trends in 20th century drought over the continental United States. *Geophysical Research Letters*, **33**, L10403, doi:10.1029/2006GL025711.

Arctic Climate Impact Assessment, 2004: *Impacts of a Warming Arctic*. Cambridge University Press, Cambridge, UK, and New York, 139 pp.

Arguez, A. (ed.), 2007: State of the Climate in 2006. *Bulletin of the American Meteorological Society*, **88(6)**, s1-s135.

Atherholt,T.B., M.W. LeChevallier, W.D. Norton, and J.S. Rosen, 1998: Effect of rainfall on giardia and crypto. *Journal of the American Water Works Association,* **90(9)**, 66-80.

Ausubel, J.H., 1991: Does climate still matter? *Nature*, **350(6320)**, 649-652.

Baker, A.C., 2001: Reef corals bleach to survive change. *Nature,* **411(6839)**, 765-66.

Baker, A.C., C.J. Starger, T.R. McClanahan, and P.W. Glynn, 2004: Coral reefs: corals' adaptive response to climate change. *Nature,* **430(7001)**, 741.

Balanya, J., J.M. Oller, R.B. Huey, G.W. Gilchrist, and L. Serra, 2006: Global genetic change tracks global climate warming in *Drosophila subobscura*. *Science*, **313(5794)**, 1773-1775.

Barry, R.G., 2006: The status of research on glaciers and global glacier recession: a review. *Progress in Physical Geography*, **30(3)**, 285-306.

Berg, E.E., J.D. Henry, C.L. Fastie, A.D. De Volder, and S.M. Matsuoka, 2006: Spruce beetle outbreaks on the Kenai Peninsula, Alaska, and Kluane National Park and Reserve, Yukon Territory: relationship to summer temperatures and regional differences in disturbance regimes. *Forest Ecology and Management*, **227(3)**, 219-232.

Berube, A. and B. Katz, 2005: *Katrina's Wndow: Confronting Concentrated Poverty Across America*. The Brookings Institution, Washington DC, 13 pp.

Board on Natural Disasters, 1999: Mitigation emerges as a major strategy for reducing losses caused by natural disasters. *Science*, **284(5422)**, 1943-1947.

Bonnin, G.M., B. Lin, and T. Parzybok, 2003: Updating NOAA/NWS rainfall frequency atlases. In: *Symposium on Observing and Understanding the Variability of Water in Weather and Climate*. 17th Conference on Hydrology, 9-13 February 2003, Long Beach, CA. American Meteorological Society, Boston, Paper J3.20. Extended abstract available at http://ams.confex.com/ams/pdfpapers/54731.pdf

Bowden, M., R. Kates, P. Kay, W. Riebsame, H. Gould, D. Johnson, R. Warrick, and D. Weiner, 1981: The effects of climate fluctuations on human populations: two hypotheses. In: *Climate and History: Studies in Past Climates and Their Impact on Man* [Wigley, T.M.L., M.J. Ingram, and G. Farmer (eds.)]. Cambridge University Press, Cambridge UK, and New York, pp. 479-513.

British Columbia Ministry of Forests and Range, 2006a: *Backgrounder: Mountain Pine Beetle District Breakdown*. FOR0011-000152, British Columbia Ministry of Forestry and Range, Victoria. 1 p.

British Columbia Ministry of Forests and Range, 2006b: *Beetle Plan Guides Forests, Communities into the Future*, News Release. http://www2.news.gov.bc.ca/news_releases_2005-2009/2006FOR0112-001109.htm

Brooks, H.E. and C.A. Doswell III, 2001: Normalized damage from major tornadoes in the United States: 1890–1999. *Weather and Forecasting*, **16**, 168–176.

Brunkard, J.M., J.L. Robles López, J. Ramirez, E. Cifuentes, S.J. Rothenberg, E.A. Hunsperger, C.G. Moore, R.M. Brussolo, N.A. Villarreal, B.M. Haddad, 2007: Dengue Fever seroprevalence and risk factors, Texas-Mexico border, 2004. *Emerging Infectious Diseases*, **13**,1477-1483.

Bull, J.J., 1980: Sex determination in reptiles. *Quarterly Review of Biology*, **55(1)**, 3-21.

Bull, J.J. and R.C. Vogt, 1979: Temperature-dependent sex determination in turtles. *Science*, **206(4423)**, 1186-1188.

Burton, I., 1962: *Types of Agricultural Occupance of Flood Plains in the United States.* University of Chicago Press, Chicago, 167 pp.

Burton, I., R.W. Kates, and G.F. White, 1993: *The Environment as Hazard*. The Guilford Press, New York, 2nd ed., 290 pp.

Campbell-Lendrum, D., A. Pruss-Ustun, and C. Corvalan, 2003: How much disease could climate change cause? In: *Climate Change and Human Health. Risks and Responses* [McMichael, A.J., D.H Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A.K. Githeko, J.D. Scheraga, and A. Woodward (eds.)]. World Health Organization, Geneva, Switzerland, pp. 133-158.

Canadian Standards Association, 2001: *Canadian Standard CSA-S37 Antennas, Towers, and Antenna Supporting Structures*. Ice and wind loads contributed by R. Morris, T. Yip, and H. Auld. Canadian Standards Association, Toronto, 118 pp.

Cathey, H.M., 1990: *USDA Plant Hardiness Zone Map*, USDA Miscellaneous Publication No. 1475. United States Department of Agriculture, Washington, DC, 1 map.

Cayan, D.R., S.A. Kammerdiener, M.D. Dettinger, J.M. Caprio, and D.H. Peterson, 2001: Changes in the onset of spring in the western United States. *Bulletin of the American Meteorological Society*, **82(2)**, 399-415.

Changnon, S.D., 2003: Measures of economic impacts of weather extremes: getting better but far from what is needed - a call for action. *Bulletin of the American Meteorological Society*, **84(9)**, 1231-1235. doi:10.1175/BAMS-84-9-1231

Checkley, W., L.D. Epstein, R.H. Gliman, D. Figueroa, R.I. Cama, J.A. Patz, and R.E. Black, 2000: Effects of El Niño and ambient temperature on hospital admissions for diarrhoeal diseases in Peruvian children. *Lancet,* **355(9202)**, 442-450.

Chowdhury, A.G. and S.P. Leatherman, 2007: Innovative testing facility to mitigate hurricane-induced losses. *EOS, Transactions of the American Geophysical Union*, **88(25)**, 262.

Christensen, N.S., A.W. Wood, N. Voisin, D.P. Lettenmaier, and R.N. Palmer, 2004: The effects of climate change on the hydrology and water resources of the Colorado River basin. *Climatic Change*, **62(1-3)**, 337-363.

Christoplos, I., 2006: The elusive 'window of opportunity' for risk reduction in post-disaster recovery. Discussion paper at the ProVention Consortium Forum 2006 *Strengthening global collaboration in disaster risk reduction*, 2-3 February 2006, Bangkok. Available at http://www.proventionconsortium.org/themes/default/pdfs/Forum06/Forum06_Session3_Recovery.pdf

Cohen, S.J. and M.W. Waddell, 2008: *Climate Change in the 21st Century*. McGill-Queen's University Press, Montreal, 392 pp. (in press, expected July 2008).

Collins, D.J. and S.P. Lowe, 2001: *A Macro Validation Dataset for U.S. Hurricane Models*. Casualty Actuarial Society Forum, Casualty Actuarial Society, Arlington, Va., pp. 217-251. Available at http://www.casact.org/pubs/forum/01wforum/01wf217.pdf

Colwell, R.R., 1996: Global climate and infectious disease: the cholera paradigm. *Science*, **274(5295)**, 2025-2031.

Corso, P.S., M.H. Kramer, K.A. Blair, D.G. Addiss, J.P. Davis and A.C. Haddix, 2003: Cost of illness in the 1993 waterborne *cryptosporidium* outbreak, Milwaukee, Wisconsin. *Emerging Infections Diseases*, **9(4)**, 426-431.

Crossett, K.M., T.J. Culliton, P.C. Wiley, and T.R. Goodspeed, 2004: *Population Trends Along the Coastal United States: 1980-2008*. National Oceanic and Atmospheric Administration, National Ocean Service, Washington, DC, 54 pp.

Curriero, F.C., J.A. Patz, J.B. Rose, and S. Lele, 2001: The association between extreme precipitations and waterborne disease outbreaks in the United States, 1948-1994. *American Journal of Public Health*, **91(8)**, 1194-1199.

Cutter, S.L. and C. Emrich, 2005: Are natural hazards and disaster losses in the U.S. increasing? *EOS, Transactions of the American Geophysical Union*, **86(41)**, 381.

Cutter, S.L., M. Gall and C.T. Emrich, 2008: Toward a comprehensive loss inventory of weather and climate hazards. In: *Climate Extremes and Society* [Diaz H.L. and R. J. Murnane (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp.279-295.

Donner, S.D., W.J. Skirving, C.M. Little, M. Oppenheimer, and O. Hoegh-Guldberg, 2005: Global assessment of coral bleaching and required rates of adaptation under climate change. *Global Change Biology,* **11(12)**, 2251-2265.

Donner, S.D., T.R. Knutson, and M. Oppenheimer, 2007: Model-based assessment of the role of human-induced climate change in the 2005 Caribbean coral bleaching event. *Proceedings of the National Academy of Sciences*, **104(13)**, 5483-5488.

Downton, M.W., J.Z.B. Miller, and R.A. Pielke Jr., 2005: Reanalysis of U.S. National Weather Service Flood Loss Database. *Natural Hazards Review*, **6**, 13-22.

Dunn P.O. and D.W. Winkler, 1999: Climate change has affected the breeding date of tree swallows throughout North America. *Proceedings of the Royal Society of London Series B,* **266(1437)**, 2487-2490.

Easterling, D.R., J.L. Evans, P.Y. Groisman, T.R. Karl, K.E. Kunkel, and P. Ambenje, 2000a: Observed variability and trends in extreme climate events: A brief review. *Bulletin of the American Meteorological Society*, **81(3)**, 417-425.

Easterling, D.R., S. Chagnon, T.R. Karl, J. Meehl, and C. Parmesan, 2000b: Climate extremes: observations, modeling, and impacts. *Science*, **289(5487)**, 2068-2074.

Ebi, K.L., D.M. Mills, J.B. Smith, and A. Grambsch, 2006: Climate change and human health impacts in the United States: an update on the results of the U.S. national assessment. *Environmental Health Perspectives,* **114(9)**, 1318-1324.

Ehrlich, P.R., D.D. Murphy, M.C. Singer, C.B. Sherwood, R.R. White, and I.L. Brown, 1980: Extinction, reduction, stability and increase: the responses of checkerspot butterfly (*Euphydryas editha*) populations to the California drought. *Oecologia*, **46(1)**, 101-105.

Engelthaler, D.M., D.G. Mosley, J.E. Cheek, C.E. Levy, K.K. Komatsu, P. Ettestad, T. Davis, D.T. Tanda, L. Miller, J.W. Frampton, R. Porter, and R.T. Bryan, 1999: Climatic and environmental patterns associated with hantavirus pulmonary syndrome, Four Corners region, United States. *Emerging Infectious Diseases,* **5(1),** 87-94.

FEMA (Federal Emergency Management Agency), 1995: *National Mitigation Strategy: Partnerships for Building Safer Communities*. Federal Emergency Management Agency, Washington, DC, 40 pp.

Gillett, N.P., A.J. Weaver, F.W. Zwiers, and M.D. Flannigan, 2004: Detecting the effect of climate change on Canadian forest fires. Ge*ophysical Research Letters*, **31**, L18211, doi:10.1029/2004GL020876.

Glantz, M.A., 1996: *Currents of Change: El Niño's Impact on Climate and Society.* Cambridge University Press, Cambridge, UK, and New York, 194 pp.

Glantz, M.A., 2003: *Climate Affairs: A Primer.* Island Press, Washington, DC, 291 pp.

Glass, G.E., J.E. Cheek, J.A. Patz, T.M. Shields, T.J. Doyle, D.A. Thoroughman, D.K. Hunt, R.E. Enscore, K.L. Gage, C. Ireland, C.J. Peters, and R. Bryan, 2000: Using remotely sensed data to identify areas of risk for hantavirus pulmonary syndrome. *Emerging Infectious Diseases,* **6(3),** 238-247.

Goklany, I.M. and S.R. Straja, 2000: U.S. trends in crude death rates due to extreme heat and cold ascribed to weather, 1979-97. *Technology*, **7(S1)**, 165-173.

Gubler, D.J., P. Reiter, K.I. Ebi, W. Yap, R. Nasci, and J.A. Patz, 2001: Climate variability and change in the United States: potential impacts on vector- and rodent-borne diseases. *Environmental Health Perspectives*, **109, (supplement 2)**, 223-233.

Guha-Sapir, D., D. Hargitt, and P. Hoyois, 2004: *Thirty Years of Natural Disasters, 1974-2003: The Numbers*. UCL Presses, Universitaires de Louvain, Louvain-la-Neuve, Belgium, 188 pp.

Hawkins, B.A. and M. Holyoak, 1998: Transcontinental crashes of insect populations? *American Naturalist,* **152(3)**, 480-484.

Hazards and Vulnerability Research Institute, 2007: *The Spatial Hazard Events and Losses Database for the United States*,

Version 5.1 [Online Database]. University of South Carolina, Columbia, SC. Available at http://www.sheldus.org

Heinz Center, The H. John Heinz III Center for Science, Economics and the Environment, 2002: *The State of the Nation's Ecosystems: Measuring the Lands, Waters, and Living Resources of the United States*. Cambridge University Press, Cambridge, UK, and New York, 288 pp.

Herring, D., 1999: Evolving in the presence of fire. *Earth Observatory*. Available at http:earthobservatory.nasa.gov/Study/BOREASFire/

Hoegh-Guldberg, O., 1999: Climate change, coral bleaching and the future of the world's coral reefs. *Marine and Freshwater Research*, **50(8)**, 839-66.

Hoegh-Guldberg, O., 2005: Marine ecosystems and climate change. In: *Climate Change and Biodiversity* [Lovejoy, T.E. and L. Hannah (eds.)]. Yale University Press, New Haven, CT, pp. 256-271.

Hoegh-Guldberg, O., R.J. Jones, S. Ward, W.K. Loh, 2002: Is coral bleaching really adaptive? *Nature,* **415(6872)**, 601-2.

Hoffman, A.A. and P.A. Parsons, 1997: *Extreme Environmental Change and Evolution*. Cambridge University Press, Cambridge, UK, and New York, 259 pp.

Inouye, D.W., 2000: The ecological and evolutionary significance of frost in the context of climate change. Ecology Letters, 3(5), 457-463.

IPCC (Intergovernmental Panel on Climate Change) 2007a: *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, 987 pp. Available at http://www.ipcc.ch

IPCC (Intergovernmental Panel on Climate Change) 2007b: Summary for Policy Makers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability.* Contribution of Working Group II to the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change [Parry, M.L., O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 7-22. Available at http://www.ipcc.ch

ISRTC, 2007: Interagency Strategic Research Plan for Tropical Cyclone Research: The Way Ahead. FCM-P36-2007, Office of the Federal Coordinator for Meteorological Services and Supporting Research, Washington, DC. Available at <http://www.ofcm.gov/p36-isrtc/pdf/entire_p36_2007.pdf>

Janzen, F.J., 1994: Climate change and temperature-dependent sex determination in reptiles. *Proceedings of the National Academy of Sciences,* **91(16)**, 7487-7490.

Johnson, T., J. Dozier, and J. Michaelsen, 1999: Climate change and Sierra Nevada snowpack. In: *Interactions Between the Cryosphere, Climate and Greenhouse Gases.* [Tranter, M., R. Armstrong, E. Brun, G. Jones, M. Sharp, and M. Williams (eds.).] IAHS publication 256, International Association of Hydrological Sciences, Wallingford (UK), pp 63-70.

Kalkstein, L.S., J.S. Greene, D.M. Mills, A.D. Perrin, J.P. Samenow, and J.-C. Cohen, 2008: Analog European heat waves for U.S. cities to analyze impacts on heat-related mortality. Bulletin of the American Meteorological Society, 89(1), 75-85.

Karl, T.R., R.W. Knight, D.R. Easterling, and R.G. Quayle, 1996: Indices of climate change for the United States. *Bulletin of the American Meteorological Society,* **77(2)**, 279-292.

Kates, R.W., C.E. Colten, S. Laska, and S.P. Leatherman, 2006: Reconstruction of New Orleans after Hurricane Katrina: A research perspective. *Proceedings of the National Academy of Sciences,* **103(40)**, 14653-14660.

Kerry, M., G. Kelk, D. Etkin, I. Burton, and S. Kalhok, 1999: Glazed over: Canada copes with the ice storm of 1998. *Environment*, **41(1)**, 6-11; 28-33.

Kingdon, J.W., 1995: *Agendas, Alternatives and Public Policies*. HarperCollins Publishers, New York, 2nd ed., 254 pp.

Kunkel, K.E., R.A. Pielke, Jr., and S.A. Changnon, 1999: Temporal fluctuations in weather and climate extremes that cause economic and human health impacts: a review. *Bulletin of the American Meteorological Society*, **80(6)**, 1077-1098.

Lanzante, J.R., T.C. Peterson, F.J. Wentz, and K.Y. Vinnikov, 2006: What do observations indicate about the change of temperatures in the atmosphere and at the surface since the advent of measuring temperatures vertically? In: *Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences*. [T.R. Karl, S.J. Hassol, C.D. Miller, and W.L. Murray (eds.)]. U.S. Climate Change Science Program, Washington, DC, pp. 47-70.

Lecomte, E., A.W. Pang, and J.W. Russell, 1998: *Ice Storm '98*. Institute for Catastrophic Loss Reduction, Ottawa, and Institute for Business and Home Safety, Boston, 39 pp.

Levitan, M., 2003: Climatic factors and increased frequencies of 'southern' chromosome forms in natural populations of *Drosophila robusta*. *Evolutionary Ecology Research,* **5(4)**, 597-604.

Logan, J.A., J. Regniere, and J.A. Powell, 2003: Assessing the impacts of global warming on forest pest dynamics. *Frontiers in Ecology and the Environment*, **1(3)**, 130-137.

Lott, N. and T. Ross, 2006: Tracking billion-dollar U.S. weather disasters. *Bulletin of the American Meteorological Society*, **87(5)**, 557-559. Available at ftp://ftp.ncdc.noaa.gov/pub/data/papers/2006nl557free.pdf

Luber, G.E., C.A. Sanchez, and L.M. Conklin, 2006: Heat-related deaths — United States, 1999–2003. *Mortality and Morbidity Weekly Report*, **55(29)**, 796-798. Available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5529a2.htm

Magnuson, J.J., D.M. Robertson, B.J. Benson, R.H. Wynne, D.M. Livingstone, T. Arai, R.A. Assel, R.G. Barry, V. Card, E. Kuusisto, N.G. Granin, T.D. Prowse, K.M Stewart, and V.S. Vuglinski, 2000: Historical trends in lake and river ice cover in the Northern Hemisphere. *Science,* **289(5485)**, 1743- 1746.

Manzello, D.P., M. Brandt, T.B. Smith, D. Lirman, J.C. Hendee, and R.S. Nemeth, 2007: Hurricanes benefit bleached corals. *Proceedings of the National Academy of Sciences*, **104(29)**, 12035-12039.

Mattson, W.J. and R.A. Haack, 1987: The role of drought in outbreaks of plant-eating insects. *Bioscience*, **37(2)**, 110-118.

McMichael, A., D. Campbell-Lendrum, S. Kovats, *et al.* 2004: Global climate change. In: *Comparative Quantification of Health Risks: Global and Regional Burden of Disease due to Selected Major Risk Factors*. [Ezzati, M.J. et al. (eds.)]. World Health Organization, Geneva, pp. 1543-1649.

Meyer, P., M. Bisping, and M. Weber, 1997: *Tropical Cyclones*. Swiss Reinsurance Company, Zurich, 31 pp.

Mileti, D., 1999: *Disasters by Design*. Joseph Henry Press, Washington, DC, 351 pp.

Miller, N.L. and N.J. Schlegel, 2006: Climate change projected fire weather sensitivity: California Santa Ana wind occurrence. *Geophysical Research Letters*, **33**, doi:10.1029/2006GL025808.

Mills, E., 2005a: Insurance in a climate of change. *Science*, **309(5737)**, 1040-1044.

Mills, E., 2005b: Response to Pielke. *Science*, **310(5754)**, 1616.

Mote, P., A. Hamlet, M. Clark, and D. Lettenmaier, 2005: Declining mountain snowpack in western North America. *Bulletin of the American Meteorological Society,* **86(1)**, 39-49.

Munich Re, 2004: Topics Geo: Annual Review: Natural Catastrophes. Munich Re Group, Munich, Germany, 56 pp. Available at <http://www.munichre.com/en>

National Drought Mitigation Center, 2006: *Understanding and Defining Drought*. [Wedsite] Available at http://www.drought.unl.edu/whatis/concept.htm

National Research Council, 1999: *The Impacts of Natural Disasters: A Framework for Loss Estimation*. National Academy Press, Washington, DC, 80 pp.

Natural Resources Canada, 2007: *Mountain Pine Beetle Program*. [Website] Available at http://mpb.cfs.nrcan.gc.ca/index_e.html.

Nordhaus, W.D., 2006: *The Economics of Hurricanes in the United States.* National Bureau of Economic Research (NBER) Working Paper, Cambridge, MA, 46 pp. Available at http://www.nber.org/papers/w12813

O'Connor, D.R., 2002: *Part I Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues.* Ontario Ministry of the Attorney General, Toronto, 500+ pp.

Oechel, W.C., S.J. Hastings, G. Vourlitis, and M. Jenkins, 1993: Recent change of arctic tundra ecosystems from net carbon dioxide sink to a source. *Nature,* **361(6412)**, 520-523.

Oechel, W.C., G.L. Vourlitis, S.J. Hastings, R.C. Zulueta, L. Hinzman, and D. Kane, 2000: Acclimation of ecosystem CO_2 exchange in the Alaska Arctic in response to decadal warming. *Nature,* **406(6799)**, 978-981.

Oedekoven, C.S., D.G. Ainley, and L.B. Spear, 2001: Variable responses of seabirds to changes in marine climate: California current 1985-1994. *Marine Ecology Progress Series,* **212**, 265-281.

OFCM, 2005: Proceedings of the Forum on Urban Meteorology: Meeting the Weather Needs of the Urban Community, September 21-23, 2004, Rockville Maryland. Office of the Federal Coordinator for Meteorological Services and Supporting Research, Washington DC. Available at <http://www.ofcm.noaa.gov/urbanmet/proceedings%202004/pdf/proceedings_of_the_forum_urban_met.pdf>

Parmenter, R.R., E.P. Yadav, C.A. Parmenter, P. Ettestad, and K.L. Gage, 1999: Incidence of plague associated with increased winter-spring precipitation in New Mexico. *American Journal of Tropical Medicine and Hygiene*, **61(5)**, 814-821.

Parmesan, C., 1996: Climate and species range. *Nature,* **382(6592)**, 765-766.

Parmesan, C., 2005: Case study: detection at multiple levels: *Euphydryas editha* and climate change. In: *Climate Change and Biodiversity* [Lovejoy, T.E. and L. Hannah (eds.)]. Yale University Press, New Haven, CT, pp. 56-60.

Parmesan, C., 2006: Ecological and evolutionary responses to recent climate change. *Annual Reviews of Ecology, Evolution and Systematics*, **37,** 637-669.

Parmesan C. and H. Galbraith, 2004: *Observed Impacts of Global Climate Change in North America*. Pew Center for Global Climate Change, Arlington, VA, 56 pp.

Parmesan, C. and P. Martens, 2008: Climate change, wildlife and human health. Chapter 14 in: SCOPE Assessment: "*Biodiversity, Global Change and Human Health*", [Sala, O.E., C. Parmesan, and L.A. Meyerson (eds.)]. Island Press, (in press).

Parmesan C. and G. Yohe, 2003: A globally coherent fingerprint of climate change impacts across natural systems. *Nature*, **421(6918)**, 37-42.

Parmesan, C., T.L. Root, and M.R. Willig, 2000: Impacts of extreme weather and climate on terrestrial biota. *Bulletin of the American Meteorological Society*, **81(3)**, 443-50.

Parmesan, C., S. Gaines, L. Gonzalez, D.M. Kaufman, J. Kingsolver, A.T. Peterson, and R. Sagarin, 2005: Empirical perspectives on species' borders: from traditional biogeography to global change. *Oikos,* **108(1)**, 58-75.

Patz, J.A., M.A. McGeehin, S.M. Bernard, K.L. Ebi, P.R. Epstein, A. Grambsch, D.J. Gubler, P. Reiter, E. Romieu, J.B. Rose, J.M. Samet, J. Trtanj, and T. F. Cecich, 2001: Potential consequences of climate variability and change for human health in the United States. In: *The U.S. National Assessment on Potential Consequences of Climate Variability and Climate Change.* United States Global Change Research Program, Cambridge University Press, Cambridge, UK, and New York, pp. 437-458.

Patz, J.A., A.K. Githeko, J.P. McCarty, S. Hussein, U. Confalonieri, and N. de Wet, 2003: Climate change and infectious diseases. In: *Climate Change and Human Health: Risks and Responses* [McMichael, A.J., D.H Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A.K. Githeko, J.D. Scheraga, and A. Woodward (eds.)]. World Health Organization, Geneva, Switzerland, pp. 103-132.

Patz, J.A., D. Campbell-Lendrum, T. Holloway, and J.A. Foley, 2005: Impact of regional climate change on human health. *Nature*, **438(7066)**, 310-317.

Peara, A. and E. Mills, 1999: Climate for change: an actuarial perspective on global warming and its potential impact on insurers. *Contingencies*, **11(1)**, 16-23.

Pickett, S.T.A. and P.S. White (eds*.)* 1985: *The Ecology of Natural Disturbance and Patch Dynamics.* Academic Press, San Diego, CA, 472 pp.

Pielke, R.A., Jr., 2005: Are there trends in hurricane destruction? *Nature*, **438(7071)**, E11. doi:10.1038/nature04426

Pielke, R., 2007: Mistreatment of the economic impacts of extreme events in the Stern Review Report on the Economics of Climate Change. Global Environmental Change: Human and Policy Dimensions, 17(3-4), 302-310.

Pielke, R.A., Jr., and C.W. Landsea, 1998: Normalized hurricane damages in the United States: 1925-1995. *Weather and Forecasting*, **13(3)**, 621-631.

Pielke, R.A., Jr., J. Rubiera, C. Landsea, M. Fernández, and R.A. Klein, 2003: Hurricane vulnerability in Latin America and the

Caribbean: normalized damage and loss potentials. *Natural Hazards Review*, **4(3)**, 101-114.

Pielke, R.A., Jr., J. Gratz, C.W. Landsea, D. Collins, M. Saunders, and R. Musulin, 2008: Normalized hurricane damages in the United States: 1900-2005. Natural Hazards Review, 9(1), 29-42.

Precht, H., J. Christophersen, H. Hensel, and W. Larcher, 1973: *Temperature and Life.* Springer-Verlag, New York, 779 pp.

Pulwarty, R., K. Broad, and T. Finan, 2003: ENSO forecasts and decision making in Brazil and Peru. In: *Mapping Vulnerability: Disasters, Development and People* [Bankoff, G., G. Frerkes, and T. Hilhorst (eds.)]. Earthscan, London, pp. 83-98.

Pulwarty, R., K. Jacobs, and R. Dole, 2005: The hardest working river: drought and critical water problems on the Colorado. In: *Drought and Water Crises: Science, Technology and Management* [D. Wilhite (ed.)]. Taylor and Francis Press, Boca Raton, FL, pp. 249-285.

Pulwarty, R., U. Trotz, and L. Nurse, 2008: Risk and criticality-Caribbean Islands in a changing climate. In: *Key Vulnerable Regions and Climate Change* [W. Hare and A. Battaglini (eds.)] (in press).

Riebsame, W.E., S.A. Changnon, Jr., and T.R. Karl, 1991: *Drought and Natural Resource Management in the United States*. Westview Press, Boulder, 174 pp.

Rodríguez-Trelles, F. and M.A. Rodríguez, 1998: Rapid microevolution and loss of chromosomal diversity in *Drosophila* in response to climate warming. *Evolutionary Ecolology,* **12(7)**, 829-838.

Root, T.L., J.T. Price, K.R. Hall, S.H. Schneider, C. Rosenzweig, and J.A. Pounds, 2003: Fingerprints of global warming on wild animals and plants. *Nature,* **421(6918)**, 57-60.

Rose, J.B., S. Daeschner, D.R. Easterling, F.C. Curriero, S. Lele, and J.A. Patz, 2000: Climate and waterborne outbreaks in the US: a preliminary descriptive analysis. *Journal of the American Water Works Association,* **92(9)**, 77-87.

Rose, J.B., P.R. Epstein, E.K. Lipp, B.H. Sherman, S.M. Bernanrd, and J.A. Patz, 2001: Climate variability and change in the United States: potential impacts on water- and foodborne diseases caused by microbiologic agents. *Environmental Health Perpectives*, **109(Suppl 2)**, 211-221.

Rowan, R., 2004: Thermal adaptation in reef coral symbionts. *Nature*, **430(7001)**, 742.

Schär, C., P.L. Vidale, D. Lüthi, C. Frei, C. Häberli, M.A. Liniger, and C. Appenzeller, 2004: The role of increasing temperature variability for European summer heat waves. *Nature*, **427(6972)**, 332-336. doi:10.1038/nature02300

Singer, M.C. and P.R. Ehrlich, 1979: Population dynamics of the checkerspot butterfly *Euphydryas editha*. *Fortschritte der Zoologie*, **25**, 53-60.

Sokolov, L.V., 2006: The influence of global warming on timing of migration and breeding of passerine bird in the twentieth century. *Zoologichesky Zhurnal*, **85**, 317-341.

Smit, B., I. Burton, R.J.T. Klein, and J. Wandel, 2000: An anatomy of adaptation to climate change and variability. *Climatic Change*, **45(1)**, 223-251.

Spear, L.B. and D.G. Ainley, 1999: Migration routes of sooty shearwaters in the Pacific ocean. *Condor,* **101(2)**, 205-218.

Stephenson, N.L., and D.J. Parsons, 1993: A research program for predicting the effects of climate change on the Sierra Nevada. In: *Proceeding of the Fourth Conference on Research in California's National Parks* [Veirs, S.D., Jr., T.J. Stohlgren, and C. Schonewald-Cox (eds.)]. National Park Service Transactions and Proceedings Series NPS/NRUX/NRTP-93/9, Cooperative Park Studies, Davis, CA, pp. 93-109.

Stern, N., 2006: *The Economics of Climate Change: The Stern Review,* Cambridge University Press, 712 pp.

Stern, N.H. and C. Taylor, 2007: Climate change: risks, ethics and the Stern Review. Science, 317(5835), 203-204.

Stott, P.A., D.A. Stone, and M.R. Allen, 2004: Human contribution to the European heat wave of 2003. *Nature,* **432(7017)**, 610-614.

Swetnam, T.W, 1993: Fire history and climate change in giant sequoia groves. *Science*, **262(5135)**, 885-889.

Taulman, J.F. and L.W. Robbins, 1996: Recent range expansion and distributional limits of the nine-banded armadillo (*Dasypus novemcinctus*) in the United States. *Journal of Biogeography*, **23(5)**, 635-648.

Thomas, C.D., E.J. Bodsworth, R.J. Wilson, A.D. Simmons, Z.G. Davies, M. Musche, and L. Conradt, 2001: Ecological and evolutionary processes at expanding range margins. *Nature*, **411(6837)**, 577-581.

Tol, R.S.J. and G.W. Yohe. 2006. A review of the "Stern Review." World Economics, 7(4), 233-250.

Trenberth, K. E., A. Dai, R.M. Rasmussen, and D.B. Parsons, 2003: The changing character of precipitation. *Bulletin of the American Meteorological Society*, **84(9)**, 1205-1217.

van Vliet, A. and R. Leemans, 2006: Rapid species' responses to changes in climate require stringent climate protection targets. In *Avoiding Dangerous Climate Change* [Schellnhuber, H.J. (ed.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 135-141.

Walker, L.R. (ed.), 1999: *Ecosystems of Disturbed Ground*. Elsevier, Amsterdam, New York, 868 pp.

Walther, G.-R., E. Post, P. Convery, A. Menzel, C. Parmesan, T.J.C. Beebee, J.-M. Fromentin, O. Hoegh-Guldberg, and F. Bairlein, 2002: Ecological responses to recent climate change. *Nature*, **416(6879)**, 389-95.

Warrick, R.A., 1980: Drought in the Great Plains: A case study of research on climate and society in the USA. In: *Climatic Constraints and Human Activities* [Ausubel, J. and A.K. Biswas (eds.)]. Pergamon, New York, pp. 93-123.

Weiser, W. (ed.), 1973: *Effects of Temperature on Ectothermic Organisms.* Springer-Verlag, New York and Berlin, 298 pp.

Werner, R.A., E.H. Holsten, S.M. Matsuoka, and R.E. Burnside, 2006: Spruce beetles and forest ecosystems in south-central Alaska: a review of 30 years of research. *Forest Ecology and Management*, **227(3)**, 195-206.

Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam, 2006: Warming and earlier spring increase in Western U.S. forest wildfire activity. *Science*, **313(5789)**, 940-943.

White, G.F., R.W. Kates, and I. Burton, 2001: Knowing better and losing even more: the use of knowledge in hazards management. *Global Environmental Change Part B: Environmental Hazards*, **3(3-4)**, 81-92.

WHO (World Health Organization), 2002: *World Health Report 2002: Reducing Risks, Promoting Healthy Life.* World Health Organization, Geneva, Switzerland, 248 pp.

WHO (World Health Organization), 2003: *Climate Change and Human Health: Risks and Responses.* [McMichael, A.J., D.H Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A.K. Githeko, J.D. Scheraga, and A. Woodward (eds.)]. World Health Organization, Geneva, Switzerland, 322 pp.

WHO (World Health Organization), 2004: *Using Climate to Predict Infectious Disease Outbreaks: A Review*. World Health Organization, Geneva, Switzerland, 55 pp.

Wilhite, D.A. (ed.), 2005: *Drought and Water Crises: Science, Technology and Management Issues*. Taylor and Francis Press, Boca Raton, FL, 432 pp.

Wilhite, D. and R. Pulwarty, 2005: Drought, crises and water management. In: *Drought and Water Crises: Science, Technology and Management Issues* [Wilhite, D.A. (ed.)]. Taylor and Francis Press, Boca Raton, FL, pp. 289-298.

Wilkinson, C.R. (ed.), 2000: *Global Coral Reef Monitoring Network: Status of Coral Reefs of the World in 2000*. Australian Institute of Marine Science, Townsville, Queensland, 363 pp.

Wilkinson, P., D.H. Campbell-Lendrum, and C.L. Bartlett, 2003: Monitoring the health effects of climate change. In: *Climate Change and Human Health: Risks and Responses* [McMichael, A.J., D.H Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A.K. Githeko, J.D. Scheraga, and A. Woodward (eds.)]. World Health Organization, Geneva, Switzerland, pp. 204-219.

WIST, 2002: Weather Information for Surface Transportation: National Needs Assessment. FCM-R18-2002, Office of the Federal Coordinator for Meteorological Services and Supporting Research, Washington, DC. Available at <http://www.ofcm.noaa.gov/wist_report/pdf/entire_wist.pdf>

CHAPTER 2 REFERENCES

Acuña-Soto, R., D.W. Stahle, M.K. Cleaveland, and M.D. Therrel, 2002: Megadrought and megadeath in 16th century Mexico. *Historical Review*, **8 (4),** 360-362.

Aguilar, E., T.C. Peterson, P. Ramírez Obando, R. Frutos, J.A. Retana, M. Solera, J. Soley, I. González García, R.M. Araujo, A. Rosa Santos, V.E. Valle, M. Brunet, L. Aguilar, L. Álvarez, M. Bautista, C. Castañón, L. Herrera, E. Ruano, J.J. Sinay, E. Sánchez, G.I. Hernández Oviedo, F. Obed, J.E. Salgado, J.L. Vázquez, M. Baca, M. Gutiérrez, C. Centella, J. Espinosa, D. Martínez, B. Olmedo, C.E. Ojeda Espinoza, R. Núñez, M. Haylock, H. Benavides, and R. Mayorga, 2005: Changes in precipitation and temperature extremes in Central America and northern South America, 1961-2003, *Journal of Geophysical Research,* **110**, D23107, doi:10.1029/2005JD006119.

Alexander, L.V., X. Zhang, T.C. Peterson, J. Caesar, B. Gleason, A.M.G. Klein Tank, M. Haylock, D. Collins, B. Trewin, F. Rahimzadeh, A. Tagipour, K. Rupa Kumar, J. Revadekar, G. Griffiths, L. Vincent, D.B. Stephenson, J. Burn, E. Aguilar, M. Brunet, M. Taylor, M. New, P. Zhai, M. Rusticucci, and J.L. Vazquez-Aguirre, 2006: Global observed changes in daily climate extremes of temperature and precipitation, *Journal of Geophysical Research*, **111**, D05109, doi:10.1029/2005JD006290.

Allan, J.C. and P.D. Komar, 2000: Are ocean wave heights increasing in the eastern North Pacific? *EOS, Transactions of the American Geophysical Union,* **47**, 561-567.

Allan, J.C. and P.D. Komar, 2006: Climate controls on US West Coast erosion processes. *Journal of Coastal Research,* **22(3)**, 511-529.

Alley, W.M., 1984. The Palmer Drought Severity Index: limitations and assumptions. *Journal of Climate and Applied Meteorology,* **23(7)**, 1100-1109.

An, S.I., J.S. Kug, A. Timmermann, I.S. Kang, and O. Timm, 2007: The influence of ENSO on the generation of decadal variability in the North Pacific. *Journal of Climate*, **20(4)**, 667-680.

Andreadis, K.M. and D.P. Lettenmaier, 2006: Trends in 20th century drought over the continental United States. *Geophysical Research Letters*, **33**, L10403, doi:10.1029/2006GL025711**.**

Andreadis, K.M., E.A. Clark, A.W. Wood, A.F. Hamlet, and D.P. Lettenmaier, 2005: Twentieth-Century drought in the conterminous United States. *Journal of Hydrometeorology*, **6(6)**, 985-1001.

Angel, J.R. and S.A. Isard, 1998: The frequency and intensity of Great Lake cyclones. *Journal of Climate*, **11(1)**, 61-71.

Arguez, A. (ed.), 2007: State of the climate in 2006. *Bulletin of the American Meteorological Society*, **88(6)**, s1-s135.

Assel, R.A., 2003: *Great Lakes ice cover, first ice, last ice, and ice duration*. NOAA Technical Memorandum GLERL-125, NOAA, Great Lakes Environmental Research Laboratory, Ann Arbor, MI, 49 pp.

Assel, R.A., 2005a: *Great Lakes ice cover climatology update: winters 2003, 2004, and 2005*. NOAA Technical Memorandum GLERL-135, NOAA, Great Lakes Environmental Research Laboratory, Ann Arbor, MI, 21 pp.

Assel, R.A., 2005b: Classification of annual Great Lakes ice cycles: winters of 1973-2002. *Journal of Climate,* **18(22)**, 4895-4905.

Assel, R.A., K. Cronk, and D.C Norton, 2003: Recent trends in Laurentian Great Lakes ice cover. *Climatic Change,* **57(1-2)**, 185-204.

Bacon, S. and D.J.T. Carter, 1991: Wave climate changes in the North Atlantic and North Sea. *International Journal of Climatology*, **11(5)**, 545-558.

Bell, D.B. and M. Chelliah, 2006: Leading tropical modes associated with interannual and multidecadal fluctuations in North Atlantic hurricane activity. *Journal of Climate,* **17(3)**, 590-612.

Bernacchi, C.J., B.A. Kimball, D.R. Quarles, S.P. Long, and D R. Ort, 2007: Decreases in stomatal conductance of soybean under open-air elevation of [CO_2] are closely coupled with decreases in ecosystem evapotranspiration. *Plant Physiology*, **143**, 134-144.

Bonsal, B.R., X. Zhang, L. Vincent, and W. Hogg, 2001: Characteristics of daily and extreme temperatures over Canada. *Journal of Climate,* **14(9)**, 1959-1976.

Bromirski, P.D., 2001, Vibrations from the "Perfect Storm". *Geochemistry Geophysics Geosystems*, **2(7)**, doi:10.1029/2000GC000119.

Bromirski, P.D., R.E. Flick, and D.R. Cayan, 2003: Decadal storminess variability along the California coast: 1858-2000. *Journal of Climate*, **16(6)**, 982-993.

Bromirski, P.D., D.R. Cayan, and R.E. Flick, 2005: Wave spectral energy variability in the northeast Pacific. *Journal of Geophysical Research*, **110**, C03005, doi:10.1029/2004JC002398.

Brooks, H.E., 2004: On the relationship of tornado path length and width to intensity. *Weather and Forecasting*, **19(2)**, 310-319.

Brooks, H.E., 2007: Development and use of climatologies of convective weather. In: *Atmospheric Convection: Research and Operational Forecasting Aspects* [Giaiotti, D.B., R. Steinacker, and F. Stel (eds.)]. Springer-Verlag, Wien, 222 pp.

Brooks, H.E. and C.A. Doswell, III, 2001: Some aspects of the international climatology of tornadoes by damage classification. *Atmospheric Research*, **56(1-4)**, 191-201.

Brooks, H.E. and N. Dotzek, 2008: The spatial distribution of severe convective storms and an analysis of their secular changes. In: *Climate Extremes and Society*. [H. F. Diaz and R. Murnane, (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 35-53.

Brooks, H.E., C.A. Doswell, III, and M.P. Kay, 2003a: Climatological estimates of local daily tornado probability. *Weather and Forecasting*, **18(4)**, 626-640.

Brooks, H.E., J.W. Lee, and J.P. Craven, 2003b: The spatial distribution of severe thunderstorm and tornado environments from global reanalysis data. *Atmospheric Research*, **67-68**, 73-94.

Burnett, A.W., M.E. Kirby, H.T. Mullins, and W.P. Patterson, 2003: Increasing Great Lake-effect snowfall during the twentieth century: a regional response to global warming? *Journal of Climate*, **16(21)**, 3535-3541.

Cavazos, T. and D. Rivas, 2004: Variability of extreme precipitation events in Tijuana, Mexico. *Climate Research*, **25(3)**, 229-243.

Cavazos, T., A.C. Comrie, and D.M. Liverman, 2002: Intraseasonal variability associated with wet monsoons in southeast Arizona. *Journal of Climate*, **15(17)**, 2477-2490.

Cayan, D.R., S.A. Kammerdiener, M.D. Dettinger, J.M. Caprio, and D.H. Peterson, 2001: Changes in the onset of spring in the Western United States. *Bulletin of the American Meteorological Society,* **82(3)**, 399-415.

Cayan, D.R., P.D. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R.E. Flick, 2008: Climate change projections of sea level extremes along the California coast. *Climatic Change*, (in press).

Chan, J.C.L., 2000: Tropical cyclone activity over the western North Pacific associated with El Niño and La Niña events. *Journal of Climate*, **13(16)**, 2960-2972.

Chan, J.C.L., 2006: Comment on "Changes in tropical cyclone number, duration, and intensity in a warming environment". *Science*, **311(5768)**, 1713.

Chan, J.C.L. and J.-E. Shi, 1996: Long-term trends and interannual variability in tropical cyclone activity over the western North Pacific. *Geophysical Research Letters*, **23(20)**, 2765-2767.

Chang, E.K.M. and Y. Fu, 2002: Inter-decadal variations in Northern Hemisphere winter storm track intensity. *Journal of Climate*, **15(6)**, 642-658.

Chang, E.K.M. and Y. Guo, 2007: Is the number of North Atlantic tropical cyclones significantly underestimated prior to the availability of satellite observations? *Geophysical Research Letters,* **34**, L14801, doi:10.1029/2007GL030169

Changnon, D., S.A. Changnon, and S.S. Changnon, 2001: A method for estimating crop losses from hail in uninsured periods and regions. *Journal of Applied Meteorology,* **40(1)**, 84-91.

Changnon, S.A., 1982: Trends in tornado frequency: fact or fallacy? In: *Preprints*, 12th Conference on Severe Local Storms, 11-15 January 1982, San Antonio, TX. American Meteorological Society, Boston, pp. 42-44.

Changnon, S.A. and D. Changnon, 2000: Long-term fluctuations in hail incidences in the United States. *Journal of Climate*, **13(3)**, 658-664.

Changnon, S. and T. Karl, 2003: Temporal and spatial variations in freezing rain in the contiguous U.S. *Journal of Applied Meteorology,* **42(9)**, 1302-1315.

Changnon, S.A., D. Changnon, and T.R. Karl, 2006: Temporal and spatial characteristics of snowstorms in the contiguous United States. *Journal of Applied Meteorology and Climatology*, **45(8)**, 1141-1155.

Chapin III, F.S., B.H. Walker, R.J. Hobbs, D.U. Hooper, J.H. Lawton, O.E. Sala, and D. Tilman, 1997: Biotic control over the functioning of ecosystems. *Science*, **277(5325)**, 500-504.

Chenoweth, M., 2003: *The 18th century climate of Jamaica derived from the journals of Thomas Thistlewood, 1750-1786.* American Philosophical Society, Philadelphia, PA, 153 pp.

Chu, J.-H., C.R. Sampson, A.S. Levine, and E. Fukada, 2002: *The Joint Typhoon Warning Center Tropical Cyclone Best Tracks, 1945-2000*. Naval Research Laboratory Reference Number NRL/MR/7540-02-16.

Clark, M.P., M.C. Serreze, and D.A. Robinson, 1999: Atmospher controls on Eurasian snow cover extent. *International Journal of Climatology*, **19(1)**, 27-40.

Cleaveland, M.L., D.W. Stahle, M.D. Therrell, J. Villanueva-Diaz, and B.T. Burnes, 2004: Tree-ring reconstructed winter precipitation and tropical teleconnections in Durango, Mexico. *Climatic Change*, **59(3),** 369-388.

Coles, S.G., 2001: *An Introduction to Statistical Modeling of Extreme Values*. Springer Verlag, New York, 208 pp.

Concannon, P.R., H.E. Brooks, and C.A. Doswell, III, 2000: Climatological risk of strong and violent tornadoes in the United States. In: *Preprints*, 2nd Symposium on Environmental Applications, 9-14 June 2000, Long Beach, CA. American Meteorological Society, Boston, pp. 212-219.

Cook, E.R., D.M. Meko, D.W. Stahle, and M.K. Cleaveland, 1999: **Drought reconstructions for the continental United States.** *Journal of Climate,* **12(4)**, 1145-1162.

Cook, E.R., R.D. D'Arrigo, and M.E. Mann, 2002: A well-verified, multiproxy reconstruction of the winter North Atlantic Oscillation index since A.D. 1400. *Journal of Climate*, **15(13)**, 1754-1764.

Cook, E.R., C.A. Woodhouse, C.M. Eakin, D.M. Meko, and D.W. Stahlo, 2004: Long-term aridity changes in the western United States. *Science*, **306(5698)**, 1015-1018.

Cooley, D., P. Naveau, and D. Nychka, 2007: Bayesian spatial modeling of extreme precipitation return levels. *Journal of the American Statistical Association*, **102(479)**, 824-840.

Cooter, E. and S. LeDuc, 1995: Recent frost date trends in the northeastern United States. *International Journal of Climatology,* **15(1)**, 65-75.

Dai, A.G., K.E. Trenberth, and T.T. Qian, 2004: A global dataset of Palmer Drought Severity Index for 1870-2002: relationship with soil moisture and effects of surface warming. *Journal of Hydrometeorology*, **5(6)**, 1117-1130.

Davis, R.E., R. Dolan, and G. Demme, 1993: Synoptic climatology of Atlantic coast north-easters. *International Journal of Climatology,* **13(2)**, 171-189.

Davison, A.C. and R.L. Smith, 1990: Models for exceedances over high thresholds (with discussion). *Journal of the Royal Statistical Society Series B,* **52(3)**, 393-442.

DeGaetano, A.T. and R.J. Allen, 2002: Trends in the twentieth century temperature extremes across the United States. *Journal of Climate,* **15(22)**, 3188-3205.

Delworth, T.L. and M.E. Mann, 2000: Observed and simulated multidecadal variability in the Northern Hemisphere. *Climate Dynamics,* **16(9)**, 661-676.

Deser, C., A.S. Phillips, and J.W. Hurrell, 2004: Pacific interdecadal climate variability: linkages between the tropics and the north Pacific during boreal winter since 1900. *Journal of Climate*, **17(16)**, 3109-3124.

Dolan, R., H. Lins, and B. Hayden, 1988: Mid-Atlantic coastal storms. *Journal of Coastal Research,* **4(3)**, 417-433.

Donnelly, J.P., 2005: Evidence of past intense tropical cyclones from backbarrier salt pond sediments: a case study from Isla de Culebrita, Puerto Rico, U.S.A. *Journal of Coastal Research,* **42(6)**, 201-210.

Donnelly, J.P. and T. Webb, III, 2004: Backbarrier sedimentary records of intense hurricane landfalls in the northeastern United States. In: *Hurricanes and Typhoons: Past, Present, and Future* [Murnane, R.J. and K-b. Liu (eds.)]. Columbia University Press, New York, pp. 58-95.

Donnelly, J.P. and J.D. Woodruff, 2007: Intense hurricane activity over the past 5,000 years controlled by El Niño and the West African monsoon. *Nature,* **447(7143),** 465-468.

Donnelly, J.P., S.S. Bryant, J. Butler, J. Dowling, L. Fan, N. Hausmann, P. Newby, B. Shuman, J. Stern, K. Westover, and T. Webb, III, 2001a: A 700 yr. sedimentary record of intense hurricane landfalls in southern New England. *Geological Society of America Bulletin*, **113(6)**, 714-727.

Donnelly, J.P., S. Roll, M. Wengren, J. Butler, R. Lederer and T. Webb, III, 2001b: Sedimentary evidence of intense hurricane strikes from New Jersey. *Geology,* **29(7)**, 615-618.

Donnelly, J.P., J. Butler, S. Roll, M. Wengren, and T. Webb, III, 2004: A backbarrier overwash record of intense storms from Brigantine, New Jersey. *Marine Geology*, **210(1-4)**, 107-121.

Doswell, C.A., III, H.E. Brooks, and M.P. Kay, 2005: Climatological estimates of daily local nontornadic severe thunderstorm probability for the United States. *Weather and Forecasting*, **20(4)**, 577-595.

Doswell, C.A., III, R. Edwards, R.L. Thompson, and K.C. Crosbie, 2006: A simple and flexible method for ranking severe weather events. *Weather and Forecasting*, **21(6)**, 939-951.

Douglas, M.W., R.A. Maddox, K. Howard, and S. Reyes, 1993: The Mexican monsoon. *Journal of Climate*, **6(8)**, 1665-1677.

Easterling, D.R., 2002: Recent changes in frost days and the frost-free season in the United States. *Bulletin of the American Meteorological Society,* **83(19)**, 1327-1332.

Easterling, D.R., B. Horton, P.D. Jones, T.C. Peterson, T.R. Karl, D.E. Parker, M.J. Salinger, V. Razuvayev, N. Plummer, P. Jamison, and C.K. Folland, 1997: Maximum and minimum temperature trends for the globe. *Science,* **277(5324)**, 364-367.

Easterling, D.R., J.L. Evans, P.Ya. Groisman, T.R. Karl, K.E. Kunkel, and P. Ambenje, 2000: Observed variability and trends in extreme climate events: a brief review. *Bulletin of the American Meteorological Society*, **81(3)**, 417-425.

Easterling, D.R., T. Wallis, J. Lawrimore, and R. Heim, 2007: The effects of temperature and precipitation trends on U.S. drought. *Geophyical. Research Letters*, **34**, L20709, doi:10.1029/2007GL031541

Edwards, DC and T.B. McKee, 1997: *Characteristics of 20th Century Drought in the United States at Multiple Time Scales*. Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 155 pp.

Eichler, T. and W. Higgins, 2006: Climatology and ENSO-related variability of North American extra-tropical cyclone activity. *Journal of Climate*, **19(10)**, 2076-2093.

Elsner, J.B., A.A. Tsonis, and T.H. Jagger, 2006: High-frequency variability in hurricane power dissipation and its relationship to global temperature. *Bulletin of the American Meteorological Society,* **87(6)**, 763-768.

Emanuel, K.A., 2005a: Increasing destructiveness of tropical cyclones over the past 30 years. *Nature,* **436(7051)**, 686-688.

Emanuel, K.A., 2005b: Emanuel replies. *Nature,* **438(7071)**, E13. doi:10.1038/nature04427

Emanuel, K.A., 2007: Environmental factors affecting tropical cyclone power dissipation. *Journal of Climate*, **20(22)**, 5497-5509.

Enfield, D.B. and L. Cid-Serrano, 2006: Projecting the risk of future climate shifts. *International Journal of Climatology*, **26(7)**, 885-895.

Englehart, P.J. and A.V. Douglas, 2001: The role of eastern North Pacific tropical storms in the rainfall climatology of western Mexico. *International Journal of Climatology*, **21(11)**, 1357-1370.

Englehart, P.J. and A.V. Douglas, 2002: México's summer rainfall patterns: an analysis of regional modes and changes in their teleconnectivity. *Atmósfera*, **15(3)**, 147-164.

Englehart, P.J. and A.V. Douglas, 2003: Urbanization and seasonal temperature trends: observational evidence from a data sparse part of North America. *International Journal of Climatology,* **23(10)**, 1253-1263.

Englehart, P.J. and A.V. Douglas, 2004: Characterizing Regional-Scale variations in monthly and seasonal surface air temperature over Mexico. *International Journal of Climatology*, **24(15)**, 1897-1909.

Englehart, P.J. and A.V. Douglas, 2005: Changing behavior in the diurnal range of surface air temperatures over Mexico. *Geophysical Research Letters,* **32**, L01701, doi:10.1029/2004GL021139.

Englehart, P.J. and A.V. Douglas, 2006: Defining intraseasonal variability within the North American monsoon. *Journal of Climate,* **19(17)**, 4243-4253.

Englehart, P.J., M.D. Lewis, and A.V. Douglas, 2008: Defining the frequency of near shore tropical cyclone activity in the eastern North Pacific from historical surface observations 1921-

2005. *Geophysical Research Letters,* **35**, L03706, doi:10.1029/2007GL032546.

Federal Emergency Management Agency, 1995: *National Mitigation Strategy: Partnerships for Building Safer Communities*. Federal Emergency Management Agency, Washington DC, 40 pp.

Fernández-Partagás, J. and H. F. Diaz, 1996: Atlantic hurricanes in the second half of the nineteenth century. *Bulletin of the American Meteorological Society*, **77(12)**, 2899-2906.

Ferretti, D.F., E. Pendall, J. A. Morgan, J. A.Nelson, D. LeCain, and A. R. Mosier, 2003: Partitioning evapotranspiration fluxes from a Colorado grassland using stable isotopes: seasonal variations and ecosystem implications of elevated atmospheric CO_2. *Plant and Soil*, **254(2)**, 291–303.

Feuerstein, B., N. Dotzek and J. Grieser, 2005: Assessing a tornado climatology from global tornado intensity distributions, *Journal of Climate,* **18(4)**, 585-596.

Folland, C.K., T.N. Palmer, and D.E. Parker, 1986: Sahel rainfall and worldwide sea temperatures, 1901-85. *Nature*, **320(6063)**, 602-607.

Frappier, A., D. Sahagian, S.J. Carpeter, L.A. Gonzalez, and B. Frappier, 2007: A stalagmite stable isotope record of recent tropical cyclone events. *Geology*, **35(2)**, 111-114. doi:10.1130/G23145A

Gandin L.S. and R.L. Kagan, 1976: *Statistical Methods of Interpretation of Meteorological Data*. (in Russian). Gidrometeoizdat, 359 pp.

García Herrera, R., F. Rubio, D. Wheeler, E. Hernández, M. R. Prieto, and L. Gimero, 2004: The use of Spanish and British documentary sources in the investigation of Atlantic hurricane incidence in historical times. In: *Hurricanes and Typhoons: Past, Present, and Future* [Murnane, R. J. and K-b. Liu (eds.)]. Columbia University Press, New York, pp. 149-176.

García Herrera, R., L. Gimeno, P. Ribera, and E. Hernández, 2005: New records of Atlantic hurricanes from Spanish documentary sources. *Journal of Geophysical Research,* **110,** D03109, doi:10.1029/2004JD005272.

Garriott, E.B., 1903: *Storms of the Great Lakes*. Bulletin K, US Department of Agriculture, Weather Bureau, Washington DC, 486 pp.

Geng, Q. and M. Sugi, 2001: Variability of the North Atlantic cyclone activity in winter analyzed from NCEP–NCAR reanalysis data. *Journal of Climate*, **14(18)**, 3863-3873.

Gershunov, A. and T.P. Barnett, 1998: Inter-decadal modulation of ENSO teleconnections. *Bulletin of the American Meteorological Society*, **79(12)**, 2715-2725.

Gershunov, A. and D.R. Cayan, 2003: Heavy daily precipitation frequency over the contiguous United States: sources of climate variability and seasonal predictability. *Journal of Climate,* **16(16)**, 2752-2765.

Gershunov, A. and H. Douville, 2008: Extensive summer hot and cold extremes under current and possible future climatic conditions: Europe and North America. In *Climate Extremes and Society* [Diaz, H.F. and R.J. Murnane, (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 74-98.

Goldenberg, S.B., C.W. Landsea, A.M. Mesta-Nuñez, and W. M. Gray, 2001: The recent increase in Atlantic hurricane activity: causes and implications. *Science*, **293(5529),** 474-479.

Graham, N.E., 1994: Decadal-scale climate variability in the tropical and North Pacific during the 1970s and 1980s: observations and model results. *Climate Dynamics*, **10(3)**, 135-162.

Graham, N.E. and H.F. Diaz, 2001: Evidence for intensification of North Pacific winter cyclones since 1948, *Bulletin of the American Meteorological Society,* **82(7)**, 1869-1893.

Gray, S.T., L.J. Graumlich, J.L. Betancourt, and G.T. Pederson, 2004: A tree-ring based reconstruction of the Atlantic Multidecadal Oscillation since 1567 AD. *Geophysical Research Letters*, **31**, L12205, doi:10.1029/2004GL019932.

Grazulis, T.P., 1993: *Significant Tornadoes, 1680-1991*. Environmental Films, St. Johnsbury, VT, 1326 pp.

Groisman, P.Ya. and R.W. Knight, 2007: Prolonged dry episodes over North America: new tendencies emerged during the last 40 years. *Advances in Earth Science*, **22(11)**, 1191-1207.

Groisman, P.Ya. and R.W. Knight, 2008: Prolonged dry episodes over the conterminous United States: New tendencies emerging during the last 40 years. *Journal of Climate*, **21**, No. 9, 1850-1862.

Groisman, P.Ya., T.R. Karl, D.R. Easterling, R.W. Knight, P.B. Jamason, K.J. Hennessy, R. Suppiah, Ch.M. Page, J. Wibig, K. Fortuniak, V.N. Razuvaev, A. Douglas, E. Førland, and P.-M. Zhai, 1999: Changes in the probability of heavy precipitation: important indicators of climatic change. *Climatic Change*, **42(2)**, 243-283.

Groisman, P.Ya. R.W. Knight , and T.R. Karl, 2001: Heavy precipitation and high streamflow in the contiguous United States: trends in the 20th century. *Bulletin of the American Meteorological Society*, **82(2)**, 219-246.

Groisman, P.Ya., R.W. Knight, T.R. Karl, D.R. Easterling, B. Sun, and J.H. Lawrimore, 2004: Contemporary changes of the hydrological cycle over the contiguous United States: trends derived from *in situ* observations, *Journal of Hydrometeorology*, **5(1)**, 64-85.

Groisman, P.Ya, R.W. Knight, D.R. Easterling, T.R. Karl, G.C. Hegerl, and V.N. Razuvaev, 2005: Trends in intense precipitation in the climate record. *Journal of Climate*, **18(9)**, 1326-1350.

Groisman, P.Ya., B.G. Sherstyukov, V.N. Razuvaev, R.W. Knight, J.G. Enloe, N.S. Stroumentova, P.H. Whitfield, E. Førland, I. Hannsen-Bauer, H. Tuomenvirta, H. Aleksandersson, A.V. Mescherskaya, and T.R. Karl, 2007: Potential forest fire danger over Northern Eurasia: changes during the 20th century. *Global and Planetary Change*, **56(3-4)**, 371-386.

Gulev, S.K. and V. Grigorieva, 2004: Last century changes in ocean wind wave height from global visual wave data. *Geophysical Research Letters*, **31**, L24302, doi:10.1029/2004GL021040.

Gumbel, E.J., 1958: *Statistics of Extremes*. Columbia University Press, New York, 375 pp.

Guttman, N.B., 1998: Comparing the Palmer Drought Index and the Standardized Precipitation Index. *Journal of the American Water Resources Association*, **34(1)**, 113-121. doi:10.1111/j.1752-1688.1998.tb05964

Hallack-Alegria, M. and D.W. Watkins, Jr., 2007: Annual and warm season drought intensity-duration-frequency analysis for Sonora, Mexico. *Journal of Climate*, **20(9)**, 1897-1909.

Harman, J.R., R. Rosen, and W. Corcoran, 1980: Winter cyclones and circulation patterns on the western Great Lakes. *Physical Geography*, **1(1)**, 28-41.

Harnik, N. and E.K.M. Chang, 2003: Storm track variations as seen in radiosonde observations and reanalysis data. *Journal of Climate*, **16(3)**, 480-495.

Harper, B.A. and J. Callaghan, 2006: On the importance of reviewing historical tropical cyclone intensities. In: *27th Conference on Hurricanes and Tropical Meteorology*, 24-28 April, 2006, Monterey, CA. American Meteorological Society, Boston, Paper 2C.1. Extended abstract available at http://ams.confex.com/ams/pdfpapers/107768.pdf

Hartmann, D.L. and E.D. Maloney, 2001: The Madden-Julian oscillation, barotropic dynamics, and North Pacific tropical cyclone formation. Part II: stochastic barotropic modeling. *Journal of the Atmospheric Sciences*, **58(17)**, 2559-2570.

Heim, Jr., R.R., 2002: A review of twentieth-century drought indices used in the United States. *Bulletin of the American Meteorological Society*, **83(8)**, 1149-1165.

Herweijer, C., R. Seager. and E.R. Cook, 2006: North American droughts of the mid-to-late nineteenth century: a history, simulation and implication for mediaeval drought. *The Holocene*, **16(2)**, 159-171.

Herweijer, C., R. Seager, E.R. Cook, and J. Emile-Geay, 2007: North American droughts of the last millennium from a gridded network of tree-ring data. *Journal of Climate*, **20(7)**, 1353-1376.

Higgins, R.W., Y. Chen, and A.V. Douglas, 1999: Interannual variability of the North American warm season precipitation regime. *Journal of Climate,* **12(3)**, 653-680.

Hirsch, M.E., A.T. DeGaetano, and S.J. Colucci, 2001: An east coast winter storm climatology. *Journal of Climate,* **14(5)**, 882-899.

Hoegh-Guldberg, O., 2005: Low coral cover in a high-CO_2 world. *Journal of Geophysical Research*, **110**, C09S06, doi:10.1029/2004JC002528.

Holland, G.J., 1981: On the quality of the Australian tropical cyclone data base. *Australian Meteorological Magazine*, **29(4)**, 169-181.

Holland, G.J., 2007: Misuse of landfall as a proxy for Atlantic tropical cyclone activity. *EOS, Transactions of the American Geophysical Union,* **88(36)**, 349-350.

Holland, G.J. and P.J. Webster, 2007: Heightened tropical cyclone activity in the North Atlantic: natural variability or climate trend? *Philosophical Transactions of the Royal Society A*, **365(1860)**, 2695-2716. doi:10.1098/rsta.2007.2083

Holton, J.R., 1979: *An Introduction to Dynamic Meteorology.* Academic Press, New York, 2nd ed., 391 pp.

Hoyos, C.D., P.A. Agudelo, P.J. Webster and J.A. Curry, 2006: Deconvolution of the factors contributing to the increase in global hurricane intensity. *Science*, **312(5770)**, 94-97.

Hsu, S.A., M.F. Martin, and B.W. Blanchard, 2000: An evaluation of the USACE's deepwater wave prediction techniques under hurricane conditions during Georges in 1998. *Journal of Coastal Research*, **16(3)**, 823-829.

Huschke, R.E. (ed.), 1959: *Glossary of Meteorology.* American Meteorological Society, Boston, MA, pp. 106 and 419.

IPCC (Intergovernmental Panel on Climate Change), 2001: *Climate Change 2001: The Scientific Basis.* Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T.,Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881 pp.

Jarvinen, B.R., C.J. Neumann, and M.A.S. Davis, 1984: *A tropical cyclone data tape for the North Atlantic Basin, 1886-1983. Contents, limitations and uses*. Technical Memorandum NWS NHC-22, NOAA, Washington DC, 21 pp.

Jones, G.V. and R.E. Davis, 1995: Climatology of Nor'easters and the 30 kPa jet. *Journal of Coastal Research*, **11(3)**, 1210-1220.

Jones, P.D. and A. Moberg, 2003: Hemispheric and large-scale surface air temperature variations: an extensive revision and an update to 2001. *Journal of Climate* **16(2)**, 206-223.

Jones, P.D., T.J. Osborn, and K.R. Briffa, 2003: Pressure-based measures of the North Atlantic Oscillation (NAO): A comparison and an assessment of changes in the strength of the NAO and in its influence on surface climate parameters. In: *The North Atlantic Oscillation: Climatic Significance and Environmental Impact* [Hurrell, J.W., Y. Kushnir, G. Ottersen, and M. Visbeck (eds.)]. American Geophysical Union, Washington, DC, pp. 51-62.

Junger, S., 1997: *The Perfect Storm: A True Story of Men Against the Sea*. Norton, New York.

Kalnay, E., M. Kanamitsu, R. Kistler, W. Collins, D. Deaven, L. Gandin, M. Iredell, S. Saha, G. White, J. Woollen, Y. Zhu, A. Leetmaa, B. Reynolds, M. Chelliah, W. Ebisuzaki, W. Higgins, J. Janowiak, K. Mo, C. Ropelewski, J. Wang, R. Jenne, and D. Joseph, 1996: The NCEP/NCAR 40-Year reanalysis project. *Bulletin of the American Meteorological Society*, **77(3)**, 437-471.

Kamahori, H., N. Yamazaki, N. Mannoji, and K. Takahashi, 2006: Variability in intense tropical cyclone days in the western North Pacific. *SOLA*, **2,** 104-107. doi:10.2151/sola.2006-027

Karl, T.R. and R.W. Knight. 1985. *Atlas of Monthly Palmer Hydrological Drought Indices (1931-1983) for the Contiguous United States*. Historical Climatology Series 3-7, National Climatic Data Center, Asheville, NC, 319 pp.

Karl, T.R. and R.W. Knight, 1998**: Secular trends of precipitation amount, frequency, and intensity in the United States.** *Bulletin of the American Meteorological Society,* **79(2)**, 231-241

Keetch, J.J. and G.M. Byram, 1968: *A Drought Index for Forest Fire Control*. U.S.D.A. Forest Service Research Paper SE-38, U.S. Department of Agriculture, Forest Service, Southesastern Forest Experiment Station, Asheville, NC, 35 pp. Available from: http://www.srs.fs.fed.us/pubs/

Key, J.R. and A.C.K. Chan, 1999: Multidecadal global and regional trends in 1000 mb and 500 mb cyclone frequencies. *Geophysical Research Letters,* **26(14)**, 2035-2056.

Kharin, V.V. and F.W. Zwiers, 2000: Changes in the extremes in an ensemble of transient climate simulation with a coupled atmosphere-ocean GCM. *Journal of Climate,* **13(2)**, 3760-3788.

Kharin, V.V., F.W. Zwiers, X. Zhang, and G.C. Hegerl, 2007: Changes in temperature and precipitation extremes in the IPCC

ensemble of global coupled model simulations. *Journal of Climate*, **20(8)**, 1419-1444.

Kim, T-W., J.B. Valdes, and J. Aparicio, 2002: Frequency and spatial characteristics of droughts in the Conchos river basin, Mexico. *International Water Resources*, **27(3)**, 420-430.

Kimberlain, T.B. and J.B. Elsner, 1998: The 1995 and 1996 North Atlantic hurricane seasons: A return of the tropical-only hurricane. *Journal of Climate*, **11**, 2062-2069.

Klotzbach, P. J., 2006: Trends in global tropical cyclone activity over the past twenty years (1986-2005). *Geophysical Research Letters*, **33**, L10805, doi:10.1029/2006GL025881.

Knaff, J.A and C.R. Sampson, 2006: Reanalysis of West Pacific tropical cyclone intensity 1966-1987. In: *27th Conference on Hurricanes and Tropical Meteorology*, 24-28 April, 2006, Monterey, CA. American Meteorological Society, Boston, Paper #5B.5. Extended abstract available at: http://ams.confex.com/ams/pdfpapers/108298.pdf

Knight, J.R., R.J. Allan, C.K. Folland, M. Vellinga, and M.E. Mann, 2005: A signature of persistent natural thermohaline circulation cycles in observed climate. *Geophysical Research Letters*, **32**, L20708, doi:10.1029/2005GL024233.

Kocin, P.J., P.N. Schnumacher, R.F. Morales, Jr., and L.W. Uccellini, 1995: Overview of the 12-14 March 1993 superstorm. *Bulletin of the American Meteorological Society,* **76(2)**, 165-182.

Komar, P.D. and J.C. Allan, 2007a: Higher waves along U.S. east coast linked to hurricanes. *EOS, Transactions, American Geophysical Union*, **88**, 301.

Komar, P.D. and J.C. Allan, 2007b: A note on the depiction and analysis of wave-height histograms. *Shore & Beach*, **75(4)**, 1-5.

Komar, P.D. and J.C. Allan, 2008: Increasing hurricane-generated wave heights along the U.S. East coast and their climate controls. Journal of Coastal Research, 24(2), 479-488.

Komar, P.D., J.C. Allan, and P. Ruggiero, 2008: Wave and nearshore-process climates: trends and variations due to Earth's changing climate. In: *Handbook of Coastal and Ocean Engineering*, [Y.C. Kim, (ed.)]. World Scientific Publishing Co., (in press).

Kossin, J.P. and D.J. Vimont, 2007: A more general framework for understanding Atlantic hurricane variability and trends. *Bulletin of the American Meteorological Society*, **88(11)**, 1767-1781.

Kossin, J.P., K.R. Knapp, D.J. Vimont, R.J. Murnane, and B.A. Harper, 2007a: A globally consistent reanalysis of hurricane variability and trends. *Geophysical Research Letters*, 34, L04815, doi:10.1029/2006GL028836.

Kossin, J.P., J.A. Knaff, H.I. Berger, D.C. Herndon, T.A. Cram, C.S. Velden, R.J. Murnane, and J.D. Hawkins, 2007b: Estimating hurricane wind structure in the absence of aircraft reconnaissance. *Weather and Forecasting*, **22(1)**, 89-101

Kunkel, K.E., 2003: North American trends in extreme precipitation. *Natural Hazards*, **29**, 291-305.

Kunkel, K.E., S.A. Changnon, and J.R. Angel, 1994: Climatic aspects of the 1993 Upper Mississippi River basin flood. *Bulletin of the American Meteorological Society*, **75(5)**, 811-822.

Kunkel, K.E., R.A. Pielke, Jr., and S.A. Changnon, 1999a: Temporal fluctuations in weather and climate extremes that cause economic and human health impacts: a review. *Bulletin of the American Meteorological Society,* **80(6)**, 1077-1098.

Kunkel, K.E., K. Andsager and D.R. Easterling, 1999b: Long-term trends in extreme precipitation events over the conterminous United States and Canada. *Journal of Climate,* **12(8)**, 2515-2527.

Kunkel, K.E., N.E. Westcott, and D.A.R. Kristovich, 2002: Assessment of potential effects of climate change on heavy lake-effect snowstorms near Lake Erie. *Journal of Great Lakes Research*, **28(4)**, 521-536.

Kunkel, K.E., D.R. Easterling, K. Redmond and K. Hubbard, 2003: Temporal variations of extreme precipitation events in the United States: 1895-2000. *Geophysical Research Letters*, **30(17)**, 1900, doi:10.1029/2003GL018052.

Kunkel, K.E., D.R. Easterling, K. Redmond, and K. Hubbard, 2004: Temporal variations in frost-free season in the United States: 1895-2000, *Geophysical Researc*h Letters, **31**, L03201, doi:10.1029/2003GL018624.

Kunkel, K.E., T.R. Karl, and D.R. Easterling, 2007a: A Monte Carlo assessment of uncertainties in heavy precipitation frequency variations. *Journal of Hydrometeorolgy*, **8(5)**, 1152-1160.

Kunkel, K.E., M. Palecki, L. Ensor, D. Robinson, K.Hubbard, D. Easterling, and K. Redmond, 2007b: Trends in 20th Century U.S. snowfall using a quality-controlled data set. In: *Proceedings*, 75th Annual Meeting, Western Snow Conference, Ominpress, 57-61.

Landsea, C.W,. R.A. Pielke, A. Mestas-Nunez, et al., 1999: Atlantic basin hurricanes: Indices of climatic changes. *Climatic Change*, **42(1)**, 89-129.

Landsea, C.W., 2005: Hurricanes and global warming. *Nature*, **438(7071)**, E11-E13. doi:10.1038/nature04477

Landsea, C., 2007: Counting Atlantic tropical cylones back in time. *EOS, Transactions of the American Geophysical Union*, **88(18)**, 197-203.

Landsea, C.W., C. Anderson, N. Charles, G. Clark, J. Dunion, J. Fernández-Partagás, P. Hungerford, C. Neumann, and M. Zimmer, 2004: The Atlantic hurricane database reanalysis project: documentation for the 1851-1910 alterations and additions to the HURDAT database. In *Hurricanes and Typhoons: Past, Present and Future* [Murnane, R. J. and K.-b. Liu (eds.)]. Columbia University Press, New York, pp. 177-221.

Landsea, C.W., B.A. Harper, K. Hoarau and J.A. Knaff, 2006: Can we detect trends in extreme tropical cyclones? *Science*. **313(5786),** 452-454.

Latif, M., E. Roeckner, M. Botzet, M. Esch, H. Haak, S. Hagemann, J. Jungclaus, S. Legutke, S. Marsland, U. Mikolajewicz, and J. Mitchell, 2004: Reconstructing, monitoring, and predicting multidecadal-scale changes in the North Atlantic thermohaline circulation with sea surface temperature. *Journal of Climate*, **17(7)**, 1605-1614.

Lourensz, R.S., 1981: *Tropical Cyclones in the Australian Region July 1909 to June 1981. Met Summary.* Bureau of Meterology, PO Box 1289K, Melbourne, Vic 3001, Australia, 94 pp.

Lemke, P., J. Ren, R.B. Alley, I. Allison, J. Carrasco, G. Flato, Y. Fujii, G. Kaser, P. Mote, R.H. Thomas, and T. Zhang, 2007: Observations: changes in snow, ice and frozen ground. In: *Climate Change 2007: The Physical Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergov-

ernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 337-383.

Lewis, P.J., 1987: *Severe Storms over the Great Lakes: A Catalogue Summary for the Period 1957-1985*. Canadian Climate Center Report No. 87-13, Atmospheric Environment Service, Downsview, ON, Canada, 342 pp.

Lins, H.F. and J.R. Slack, 1999: Streamflow trends in the United States. *Geophysical Research Letters*, **26(2)**, 227-230.

Lins, H.F. and J.R. Slack, 2005: Seasonal and regional characteristics of U.S. streamflow trends in the United States from 1940 to 1999. *Physical Geography*, **26(6)**, 489-501.

Liu, K-b., 2004: Paleotempestology: principles, methods, and examples from Gulf Coast lake sediments. In: *Hurricanes and Typhoons: Past, Present, and Future* [Murnane, R. J. and K-b. Liu (eds.)]. Columbia University Press, New York, pp. 13-57.

Liu, K-b. and M.L. Fearn, 1993: Lake-sediment record of late holocene hurricane activities from coastal Alabama. *Geology*, **21(9),** 793-796.

Liu, K-b. and M.L. Fearn, 2000: Reconstruction of prehistoric landfall frequencies of catastrophic hurricanes in northwestern Florida from lake sediment records. *Quaternary Research*, **54(2),** 238-245.

Liu, K-b., C. Shen, and K.-s. Louie, 2001: A 1,000-year history of typhoon landfalls in Guangdong, southern China, reconstructed from Chinese historical documentary records. *Annals of the Association of American Geographers,* **91(3)**, 453-464.

Louie, K.-s. and K.-b. Liu, 2003: Earliest historical records of typhoons in China. *Journal of Historical Geography*, **29(3),** 299-316.

Louie, K.-s. and K.-b. Liu, 2004: Ancient records of typhoons in Chinese historical documents. In: *Hurricanes and Typhoons: Past, Present, and Future* [Murnane, R.J. and K-b. Liu (eds.)]. Columbia University Press, New York, pp. 222-248.

Ludlum, D.M., 1963: *Early American hurricanes, 1492-1870*. American Meteorological Society, Boston MA, 198 pp.

Madden, R. and P. Julian, 1971: Detection of a 40-50 day oscillation in the zonal wind in the tropical Pacific. *Journal of the Atmospheric Sciences,* **28(5)**, 702-708.

Madden, R. and P. Julian, 1972: Description of global-scale circulation cells in the tropics with a 40-50 day period. *Journal of the Atmospheric Sciences,* **29(6)**, 1109-1123.

Magnuson, J. J., D.M. Robertson, B.J. Benson, R.H. Wynne, D.M. Livingston, T. Arai, R.A. Assel, R. G. Barry, V. Card, E. Kuusisto, N.G. Granin, T.D. Prowse, K.M. Stewart, and V.S. Vuglinski, 2000: Historical trends in lake and river ice cover in the Northern Hemisphere. *Science,* **289(5485)**, 1743-1746.

Maloney, E.D. and D.L. Hartmann, 2000a: Modulation of eastern North Pacific hurricanes by the Madden-Julian oscillation. *Journal of Climate*, **13(9)**, 1451-1460.

Maloney, E.D. and D.L. Hartmann, 2000b: Modulation of hurricane activity in the Gulf of Mexico by the Madden-Julian oscillation. *Science*, **287(5460)**, 2002-2004.

Maloney, E.D. and D.L. Hartmann, 2001: The Madden-Julian oscillation, barotropic dynamics, and North Pacific tropical cyclone formation. Part I: Observations. *Journal of the Atmospheric Sciences*, **58(17)**, 2545-2558.

Mann, M.E. and K. Emanuel, 2006: Atlantic hurricane trends linked to climate change. *EOS, Transactions of the American Geophysical Union*, **87(24)**, 233, 238, 241.

Mann, M.E. and J. Park, 1994: Global-scale modes of surface temperature variability on interannual to century timescales. *Journal of Geophysical Research*, **99(D12)**, 25819-25834.

Mann, M.E., T.A. Sabbatelli and U. Neu, 2007: Evidence for a modest undercount bias in early historical Atlantic tropical cyclone counts. *Geophysical Research Letters,* **34**, L22707, doi:10.1029/2007GL031781.

Mann, M.E., K.A. Emanuel, G.J. Holland and P.J. Webster, 2007: Atlantic tropical cyclones revisited. EOS, Transactions of the American Geophysical Union, 88(36), 349.

Manning, D.M. and R.E. Hart, 2007: Evolution of North Atlantic ERA40 tropical cyclone representation. *Geophysical Research Letters,* **34,** L05705, doi:10.1029/2006GL028266.

Maue, R.N. and R.E. Hart, 2007: Comment on "Low frequency variability in globally integrated tropical cyclone power dissipation" by Ryan Sriver and Matthew Huber. *Geophysical Research Letters,* **34,** L05705, doi:10.1029/2006GL028266.

McCabe, G.J., M.P. Clark, and M.C. Serreze, 2001: Trends in Northern Hemisphere surface cyclone frequency and intensity. *Journal of Climate,* **14(12)**, 2763-2768.

McCarthy, D.W., J.T. Schaefer, and R. Edwards, 2006: What are we doing with (or to) the F-xcale? *Preprints,* 23rd Conference on Severe Local Storms, 5-10 November 2006, St. Louis, MO. American Meteorological Society, Boston, Paper 5.6. Extended abstract available online at http://ams.confex.com/ams/pdfpapers/115260.pdf

McKee, T.B., N.J. Doesken and J. Kleist, 1993: The relationship of drought frequency and duration to time scales. In: *Preprints of the Eight Conference on Applied Climatology*, 17-22 January 1993, Anaheim, CA. American Meteorological Society, Boston, pp. 179-184.

Michaels, P.J., P.C. Knappenberger, O.W. Frauenfeld, and R.E. Davis, 2004: Trends in precipitation on the wettest days of the year across the contiguous USA. *International Journal of Climatology* **24(15)**, 1873-1882.

Millás, J.C. and L. Pardue, 1968: *Hurricanes of the Caribbean and Adjacent Regions, 1492-1800*. Academy of the Arts and Sciences of the Americas, Miami, FL, 328 pp.

Miller, A.J., Cayan, D., T. Barnett, N. Graham, and J. Oberhuber, 1994: The 1976-77 climate shift of the Pacific Ocean. *Oceanography*, **(7)1**, 21-26.

Miller, D. L., C.I. Mora, H.D. Grissino-Mayer, M.E. Uhle, and Z. Sharp, 2006: Tree-ring isotope records of tropical cyclone activity. *Proceedings of the National Academy of Sciences*, **103(39)**, 14294-14297.

Mo, K.C. and R.E. Livezey, 1986: Tropical-extratropical geopotential height teleconnections during the northern hemisphere winter. *Monthly Weath*er *Review*, **114(12)**, 2488-2515.

Mock, C.J., 2004: Tropical cyclone reconstructions from documentary records: examples for South Carolina, United States. In: *Hurricanes and Typhoons: Past, Present, and Future* [Murnane, R.J. and K-b. Liu (eds.)]. Columbia University Press, New York, pp. 121-148.

Moon, I.J., I. Ginis, T. Hara, H.L. Tolman, C.W. Wright, and E.J. Walsh, 2003:, Numerical simulation of sea surface directional

wave spectra under hurricane wind forcing. *Journal of Physical Oceanography*, **33(8)**, 1680-1706.

Morgan, J.A., D.R. LeCain, J.J. Read, H.W. Hunt, and W.G. Knight, 1998: Photosynthetic pathway and ontogeny affect water relations and the impact of CO_2 on *Bouteloua gracilis* (C_4) and *Pascopyrum smithii* (C_3). *Oecologia*, **114(4)**, 483-493.

Mueller, K.J., M. DeMaria, J. Knaff, J.P. Kossin, T.H. Vonder Haar, 2006: Objective estimation of tropical cyclone wind structure from infrared satellite data. *Weather and Forecasting*, **21(6)**, 990-1005.

Nakamura, H., 1992: Midwinter suppression of baroclinic wave activity in the Pacific. *Journal of the Atmospheric Sciences*, **49(17)**, 1629-1642.

Neelin, J.D., M. Münnich, H. Su, J.E. Meyerson, and C.E. Holloway, 2006: Tropical drying trends in global warming models and observations. *Proceedings of the National Academy of Sciences*, **103(16)**, 6110-6115.

Nelson, J.A., J.A. Morgan, D.R. LeCain, A.R. Mosier, D.G. Milchunas, B.A. Parton, 2004: Elevated CO_2 increases soil moisture and enhances plant water relations in a long-term field study in semi-arid shortgrass steppe of Colorado. *Plant and Soil*, **259(1/2)**, 169–179.

Neumann, C.J., B.R. Jarvinen, C.J. McAdie, and J.D. Elms, 1993: *Tropical Cyclones of the North Atlantic Ocean, 1871-1992.* Prepared by the National Climatic Data Center, Asheville, NC, in cooperation with the National Hurricane Center, Coral Gables, FL. NOAA, National Climatic Data Center, Asheville NC, 4th rev., 193 pp.

Nicholas, R. and D. S. Battisti, 2008: Drought recurrence and seasonal rainfall prediction in the Río Yaqui basin, Mexico. *Journal of Applied Meteorology and Climatology*, (in press).

Noel, J. and D. Changnon, 1998: A pilot study examining U.S. winter cyclone frequency patterns associated with three ENSO parameters. *Journal of Climate*, **11(8)**, 2152-2159.

Nyberg, J., B.A. Malmgren, A. Winter, M.R. Jury, K. Halimeda Kilbourne, and T.M. Quinn, 2007: Low Atlantic hurricane activity in the 1970s and 1980s compared to the past 270 years. *Nature,* **447(7145),** 698-702.

Paciorek, C.J., J.S. Risbey, V. Ventura, and R.D. Rosen, 2002: Multiple indices of Northern Hemisphere cyclone activity, Winters 1949-99. *Journal of Climate*, **15(13)**, 1573-1590.

Palmer, W.C., 1965: *Meteorological Drought*. Research Paper No. 45, U.S. Department of Commerce, Weather Bureau, Washington DC, 58 pp.

Palmer, W.C., 1968: Keeping track of crop moisture conditions, nationwide: the new crop moisture index. *Weatherwise,* **21(4)**, 156-161.

Pavia, E.G. and A. Badan, 1998: ENSO modulates rainfall in the Mediterranean Californias. *Geophysical Research Letters*, **25(20)**, 3855-3858.

Peterson, T.C., 2003: Assessment of urban versus rural in situ surface temperatures in the contiguous United States: No difference found. *Journal of Climate*, **16(18)**, 2941-2959.

Peterson, T.C., M.A. Taylor, R. Demeritte, D.L. Duncombe, S. Burton, F. Thompson, A. Porter, M. Mercedes, E. Villegas, R. Semexant Fils, A. Klein Tank, A. Martis, R. Warner, A. Joyette, W. Mills, L. Alexander, B. Gleason, 2002: Recent changes in the climate extemes in the Caribbean region. *Journal of Geophysical Research*, **107(D21)**, 4601, doi:10.1029/2002JD002251.

Peterson, T.C., X. Zhang, M. Brunet-India, and J.L. Vázquez-Aguirre, 2008: Changes in North American extremes derived from daily weather data. Journal Geophysical Research, 113, D07113, doi:10.1029/2007JD009453.

Pickands, J., 1975: Statistical inference using extreme order statistics. *Annals of Statistics,* **3(1)**, 119-131.

Pielke, R.A., Jr., 2005: Are there trends in hurricane destruction? *Nature*, **438(7071)**, E11.

Robeson, S.M., 2004: Trends in time-varying percentiles of daily minimum and maximum temperature over North America. *Geophysical Research Letters*, **31**, L04203, doi:10.1029/2003GL019019.

Robinson, D.A., K.F. Dewey, and R.R. Heim, Jr., 1993: Global snow cover monitoring: an update. *Bulletin of the American Meteorological Society*, **74(9)**, 1689-1696.

Ropelewski, C., 1999: The great El Niño of 1997-1998: impacts on precipitation and temperature**.** *Consequences***, 5(2)**, 17-25.

Sanders, F. and J.R. Gyakum, 1980: Synoptic-dynamic climatology of the "bomb". *Monthly Weather Review*, **108(10)**, 1589-1606.

Santer, B.D., T.M.L. Wigley, P.J. Gleckler, C. Bonfils, M.F. Wehner, K. AchutaRao, T.P. Barnett, J.S. Boyle, W. Brueggemann, M. Fiorino, N. Gillett, J.E. Hansen, P.D. Jones, S.A. Klein, G.A. Meehl, S.C.B. Raper, R.W. Reynolds, K.E. Taylor, and W.M. Washington, 2006: Forced and unforced ocean temperature changes in Atlantic and Pacific tropical cyclogenesis regions. *Proceedings of the National Academy of Sciences*, **103(38)**, 13905-13910.

Schlesinger, M.E. and N. Ramankutty, 1994: An oscillation in the global climate system of period 65-70 years. *Nature,* **367(6465)**, 723-726.

SEMARNAT (Secretaría de Medio Ambiente y Recursos Naturales), 2000: *Programa nacional contra incendios forestales. Resultados 1995-2000*. SEMARNAT, Mexico, 263 pp.

Semenov, V.A. and L. Bengtsson, 2002: Secular trends in daily precipitation characteristics: greenhouse gas simulation with a coupled AOGCM. *Climate Dynamics,* **19(2)**, 123-140.

Serreze, M.C., F. Arse, R.G. Barry, and J.C. Rogers, 1997: Icelandic low cyclone activity. Climatological features, linkages with the NAO, and relationships with recent changes in the Northern Hemisphere circulation. *Journal of Climate,* **10(3)**, 453-464.

Seymour, R.J., R.R. Strange, D.R. Cayan, and R.A. Nathan, 1984: Influence of El Niños on California's wave climate. In: *Proceedings of the 19th International Conference on Coastal Engineering,*, 3-7 September 1984, Houston, TX. American Society of Civil Engineers, New York, pp. 577-592.

Shabbar, A. and W. Skinner, 2004: Summer drought patterns in Canada and the relationship to global sea surface temperatures. *Journal of Climate*, **17(14)**, 2866-2880.

Shein, K. A. (ed.), 2006: State of the climate in 2005. *Bulletin of the American Meteorological Society,* **87(6)**, S1-S102.

Simmonds, I. and K. Keay, 2002: Surface fluxes of momentum and mechanical energy over the North Pacific and North Atlantic Oceans. *Meteorology and Atmospheric Physics,* **80(1-4)**, 1-18.

Sims, A.P., D.D.S. Niyogi, and S. Raman, 2002: Adopting drought indices for estimating soil moisture: A North Carolina case study. *Geophysical Research Letters*, **29(8)**, 1183.

Smith, R.L., 2003: Statistics of extremes, with applications in environment, insurance and finance. In: *Extreme Values in Finance, Telecommunications and the Environment* [Finkenstadt, B. and H. Rootzén (eds.)]. Chapman and Hall/CRC Press, Boca Raton, FL, pp. 1-78.

Smith, R.L., C. Tebaldi, D. Nychka, and L.O. Mearns, 2008: Bayesian modeling of uncertainty in ensembles of climate models. *Journal of the American Statistical Association, (*accepted).

Soja, A.J., N.M. Tchebakova, N.H.F. French, M.D. Flannigan, H.H. Shugart, B.J. Stocks, A.I. Sukhinin, E.I. Parfenova, F.S. Chapin, III, and P.W. Stackhouse, Jr., 2007: Climate-induced boreal forest change: predictions versus current observations. *Global and Planetary Change*, **56(3-4)**, 274-296.

Sriver, R. and M. Huber, 2006: Low frequency variability in globally integrated tropical cyclone power dissipation. *Geophysical Research Letters*, **33**, L11705, doi:10.1029/2006GL026167.

Stahl, K., R.D. Moore, and I.G. McKendry, 2006: Climatology of winter cold spells in relation to mountain pine beetle mortality in British Columbia, Canada. *Climate Research*, **32(1)**, 13-23.

Stahle, D. W., E.R. Cook, M.K. Cleaveland, M.D. Therrell, D.M. Meko, H.D. Grissino-Mayer, E. Watson, and B.H. Luckman, 2000: Tree-ring data document 16th century megadrought over North America. *EOS, Transactions of the American Geophysical Union*, **81(12)**, 121.

Stone, D.A., A.J. Weaver, and F.W. Zwiers, 2000: Trends in Canadian precipitation intensity. *Atmosphere-Ocean*, **38(2)**, 321-347.

Sun, B.M. and P.Ya. Groisman, 2004: Variations in low cloud cover over the United States during the second half of the twentieth century. *Journal of Climate*, **17(9)**, 1883-1888.

Therrell, M.D., D.W. Stahle, M.K. Cleaveland, and J. Villanueva-Diaz, 2002: Warm season tree growth and precipitation in Mexico. *Journal of Geophysical Research*, **107(D14),** 4205, doi:10.1029/2001JD000851.

Trenberth, K.E., 1990: Recent observed interdecadal climate changes in the Northern Hemisphere. *Bulletin of the American Meteorological Society,* **71(7)**, 988-993.

Trenberth, K.E. and J.W. Hurrell, 1994: Decadal atmospheric-ocean variations in the Pacific. *Climate Dynamics*, **9(6)**, 303-319.

Trenberth, K.E. and D.J. Shea, 2006: Atlantic hurricanes and natural variability in 2005. *Geophysical Research Letters,* **33**, L12704, doi:10.1029/2006GL026894.

Trenberth, K.E., J.M. Caron, D.P. Stepaniak, and S. Worley, 2002: The evolution of El Niño-Southern Oscillation and global atmospheric surface temperatures. *Journal of Geophysical Research*, **107(D8)**, 4065, doi:10.1029/2000JD000298.

Uppala, S.M., P.W. Kållberg, A.J. Simmons, U. Andrae, V. da Costa Bechtold, M. Fiorino, J.K. Gibson, J. Haseler, A. Hernandez, G.A., Kelly, X. Li, K. Onogi, S. Saarinen, N. Sokka, R.P. Allan, E. Andersson, K. Arpe, M.A. Balmaseda, A.C.M. Beljaars, L. van de Berg, J. Bidlot, N. Bormann, S. Caires, F. Chevallier, A. Dethof, M. Dragosavac, M. Fisher, M. Fuentes, S. Hagemann, E. Hólm, B.J. Hoskins, L. Isaksen, P.A.E.M. Janssen, R. Jenne, A.P. McNally, J.-F. Mahfouf, J.-J. Morcrette, N.A. Rayner, R.W. Saunders, P. Simon, A. Sterl, K.E. Trenberth, A. Untch, D. Vasiljevic, P. Viterbo, and J. Woollen, 2005: The ERA-40 re-analysis. *Quarterly Journal of the Royal Meteorological Society,* **131(612)**, 2961-3012. doi:10.1256/qj.04.176

Vecchi, G.A. and T.R. Knutson, 2008: On estimates of historical North Atlantic tropical cyclone activity. Journal of Climate, Early online release doi:10.1175/2008JCLI2178.1.

Verbout, S.M., H.E. Brooks, L.M. Leslie,and D.M. Schultz, 2006: Evolution of the US tornado database: 1954-2003. *Weather and Forecasting,* **21(1)**, 86-93.

Vimont, D.J. and J.P. Kossin, 2007: The Atlantic meridional mode and hurricane activity. *Geophysical Research Letters*, **34**, L07709, doi:10.1029/2007GL029683.

Vincent, L.A. and E. Mekis, 2006: Changes in daily and extreme temperature and precipitation indices for Canada over the 20th century. *Atmosphere-Ocean,* **44(2)**, 177-193.

Vörösmarty, C., D. Lettenmaier, C. Leveque, M. Meybeck, C. Pahl-Wostl, J. Alcamo, W. Cosgrove, H. Grassl, H. Hoff, P. Kabat, F. Lansigan, R. Lawford ,R. Naiman, as members of The Framing Committee of the Global Water System Project, 2004: Humans transforming the global water system. *EOS, Transactions of the American Geophysical Union*, **85(48)**, 509, 513-514.

Wang, D.W., D.A. Mitchell, W.J. Teague, E. Jarosz, and M.S. Hulbet, 2005: Extreme waves under Hurricane Ivan. *Science,* **309(5736)**, 896.

Wang, W.L. and V.R. Swail, 2001: Changes of extreme wave heights in Northern Hemisphere oceans and related atmospheric circulation regimes. *Journal of Climate,* **14(10)**, 2201-2204.

Wang, X.L., V.R. Swail, and F.W. Zwiers, 2006a: Climatology and changes of extratropical storm tracks and cyclone activity: comparison of ERA-40 with NCEP/NCAR reanalysis for 1958-2001. *Journal of Climate,* **19(13)**, 3145-3166.

Wang, X.L., H. Wan, and V.R. Swail, 2006b: Observed changes in cyclone activity in Canada and their relationships to major circulation regimes. *Journal of Climate,* **19(6)**, 895-916.

Webster, P.J., G.J. Holland, J.A. Curry, and H.-R. Chang, 2005: Changes in tropical cyclone number, duration, and intensity in a warming environment. *Science*, **309(5742)**, 1844-1846.

Wehner, M.F., 2004: Predicted 21st century changes in seasonal extreme precipitation events in the Parallel Climate Model. *Journal of Climate,* **17(21)**, 4281-4290.

Wehner, M., 2005: Changes in daily precipitation and surface air temperature extremes in the IPCC AR4 models. *US CLIVAR Variations*, **3(3)**, 5-9.

Westerling, A.L., H.G. Hidalgo, and D.R. Cayan, 2006. Warming and earlier spring increases in western U.S. forest wildfire activity. *Science* **313(5789)**, 940-943.

Woodhouse, C.A. and J.T. Overpeck, 1998: **2000 Years of drought variability in the central United States.** *Bulletin of the American Meteorological Society*, **79(12)**, 2693-2714.

Wu, L., B. Wang, and S. Geng, 2005: Growing typhoon influence on east Asia. *Geophysical Research Letters*, **32**, L18703, doi:10.1029/2005GL022937.

Wu, C.-C., K.-H. Chou, Y. Wang, Y.-H. Kuo, 2006: Tropical cyclone initialization and prediction based on four-dimensional variational data assimilation. *Journal of the Atmospheric Sciences*, **63(9)**, 2383-2395.

Xie, L., L.J. Pietrafesa, J.M. Morrison, and T. Karl, 2005: Climatological and interannual variability of North Atlantic hurricane tracks. *Journal of Climate*, **18(24)**, 5370-5381.

Zhang, R., T.L. Delworth, and I.M. Held, 2007: Can the Atlantic Ocean drive the observed multidecadal variability in Northern Hemisphere mean temperature? *Geophysical Research Lett*ers, **34,** L02709, doi:10.1029/2006GL028683.

Zhang, X., W.D. Hogg, and E. Mekis, 2001: Spatial and temporal characteristics of heavy precipitation events over Canada. *Journal of Climate*, **14(9)**, 1923-1936.

Zhang, X., J.E. Walsh, J. Zhang, U.S. Bhatt and M. Ikeda, 2004: Climatology and inter-annual variability of Arctic cyclone activity, 1948-2002. *Journal of Climate,* **17(12)**, 2300-2317.

Zwiers, F.W. and V.V. Kharin, 1998: Changes in the extremes of the climate simulated by CCC GCM2 under CO_2 doubling. *Journal of Climate*, **11(9)**, 2200-2222.

CHAPTER 3 REFERENCES

Alexander, L.V., X. Zhang, T.C. Peterson, J. Caesar, B. Gleason, A.M.G. Klein Tank, M. HaylockD. Collins, B. Trewin, F. Rahimzadeh, A. Tagipour, K. Rupa Kumar, J. Revadekar, G. Griffiths, L. Vincent, D.B. Stephenson, J. Burn, E. Aguilar, M. Brunet, M. Taylor, M. New, P. Zhai, M. Rusticucci, and J.L. Vazquez-Aguirre, 2006: Global observed changes in daily climate extremes of temperature and precipitation. *Journal of Geophysical Research*, **111**, D05109, doi:10.1029/2005JD006290.

Allan, J.C. and P.D. Komar, 2000: Are ocean wave heights increasing in the eastern North Pacific? *EOS, Transaction of the American Geophysical Union*, **81**, 561-567.

Allan, J.C. and P.D. Komar, 2006: Climate controls on US West Coast erosion processes. *Journal of Coastal Research*, **22(3)**, 511-529.

Allen, M., 2003: Liability for climate change: will it ever be possible to sue anyone for damaging the climate? *Nature*, **421(6926)**, 891-892.

Allen, M.R. and W.J. Ingram, 2002: Constraints on future changes in climate and the hydrological cycle. *Nature*, **419(6903)**, 224-232.

Andreas, E.L. and K.A. Emanuel, 2001: Effects of sea spray on tropical cyclone intensity. *Journal of the Atmospheric Sciences*, **58(24)**, 3741-3751.

Arora, V.K. and G.J. Boer, 2001: Effects of simulated climate change on the hydrology of major river basins. *Journal of Geophysical Research,* **106(D4)**, 3335-3348.

Arzayus, L.F. and W.J. Skirving, 2004: Correlations between ENSO and coral reef bleaching. In: *Tenth International Coral Reef Symposium*, 28 June - 2 July 2004, Okinawa, Japan. Japanese Coral Reef Society, Tokyo.

Arzel, O., T. Fichefet, and H. Goosse, 2006: Sea ice evolution over the 20th and 21st centuries as simulated by current AOGCMs. *Ocean Modelling,* **12(3-4),** 401-415.

Baik, J.-J. and J.-S. Paek, 1998: A climatology of sea surface temperature and the maximum intensity of western North Pacific tropical cyclones. *Journal of the Meteorological Society of Japan,* **76(1)**, 129-137.

Barnett, D.N., S.J. Brown, J.M. Murphy, D.M.H. Sexton, and M.J. Webb, 2006: Quantifying uncertainty in changes in extreme event frequency in response to doubled CO_2 using a large ensemble of GCM simulations. *Climate Dynamics*, **26(5)**, 489-511.

Bell, G.D. and M. Chelliah, 2006: Leading tropical modes associated with interannual and multidecadal fluctuations in North Atlantic hurricane activity. *Journal of Climate*, **19(4)**, 590-612.

Bell, J.L. and L.C. Sloan, 2006: CO_2 Sensitivity of extreme climate events in the western United States. *Earth Interactions,* **10(15)**, 1-17. doi:10.1175/EI181.1

Bell, J.L., L.C. Sloan, and M.A. Snyder, 2004: Regional changes in extreme climatic events: a future climate scenario. *Journal of Climate*, **17(1)**, 81-87.

Bender, M.A. and I. Ginis, 2000: Real-case simulations of hurricane-ocean interaction using a high-resolution coupled model: effects on hurricane intensity. *Monthly Weather Review*, **128(4)**, 917-946.

Bengtsson, L., M. Botzet, and M. Esch, 1996: Will greenhouse gas-induced warming over the 50 years lead to a higher frequency and greater intensity of hurricanes? *Tellus A,* **48(1),** 57-73.

Bengtsson, L., K. Hodges, and E. Roeckner, 2006: Storm tracks and climate change. *Journal of Climate,* **19(15)**, 3518-3543.

Bengtsson, L., K.I. Hodges, M. Esch, N. Keenlyside, L. Kornblueh, J.-J. Luo, and T. Yamagata, 2007: How may tropical cyclones change in a warmer climate. *Tellus A*, **59(4),** 539-561.

Beniston, M., 2004: The 2003 heat wave in Europe: a shape of things to come? An analysis based on Swiss climatological data and model simulations. *Geophysical Research Letters,* **31**, L02202, doi:10.1029/2003GL018857.

Bister, M. and K.A. Emanuel, 1997: The genesis of hurricane Guillermo: TEXMEX analyses and a modeling study. *Monthly Weather Review*, **125(10)**, 2662-2682.

Brabson, B.B., D.H. Lister, P.D. Jones, and J.P. Palutikof, 2005: Soil moisture and predicted spells of extreme temperatures in Britain. *Journal of Geophysical Research,* **110,** D05104, doi:10.1029/2004JD005156.

Breshears, D.D., N.S. Cobb, P.M. Rich, K.P. Price, C.D. Allen, R.G. Balice, W.H. Romme, J.H. Kastens, M.L. Floyd, J. Belnap, J.J. Anderson, O.B. Myers, and C.W. Meyer 2005: Regional vegetation die-off in response to global-change-type drought. *Proceedings of the National Academy of Sciences,* **102(42)**, 15144-15148.

Broccoli, A.J. and S. Manabe, 1990: Can existing climate models be used to study anthropogenic changes in tropical cyclone climate? *Geophysical Research Letters,* **17(11),** 1917-1920.

Brooks, H.E. and N. Dotzek, 2008: The spatial distribution of severe convective storms and an analysis of their secular changes. In: *Climate Extremes and Society.* [Diaz, H. F. and R. Murnane (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 35-53.

Brooks, H.E., J.W. Lee, and J.P. Craven, 2003: The spatial distribution of severe thunderstorm and tornado environments from global reanalysis data. *Atmospheric Research,* **67-68,** 73-94.

Brunner, R.D., A.H. Lynch, J.C. Pardikes, E.N. Cassano, L.R. Lestak, and J.M. Vogel., 2004: An Arctic disaster and its policy implications. *Arctic,* **57(4),** 336-346.

Burke, E.J., S.J. Brown, and N. Christidis, 2006: Modelling the recent evolution of global drought and projections for the 21st

century with the Hadley Centre climate model. *Journal of Hydrometeorology*, **7(5),** 1113-1125.

Burkholder, B.A. and D.J. Karoly, 2007: An assessment of US climate variability using the Climate Extremes Index. In: *Nineteenth Conference on Climate Variability and Change*, 15-18 January, 2007, San Antonio, TX. American Meteorological Society, Boston, Paper 2B.9. Extended abstract available at http://ams.confex.com/ams/pdfpapers/117942.pdf

Caesar, J., L. Alexander, and R. Vose, 2006: Large-scale changes in observed daily maximum and minimum temperatures: creation and analysis of a new gridded data set. *Journal of Geophysical Research*, **111**, D05101, doi:10.1029/2005JD006280.

Caires, S. and A. Sterl, 2005: 100-year return value estimates for wind speed and significant wave height from the ERA-40 data. *Journal of Climate*, **18(7),** 1032-1048.

Caires, S., V.R. Swail, and X.L. Wang, 2006: Projection and analysis of extreme wave climate. *Journal of Climate,* **19(21),** 5581-5605.

Camargo, S., A.G. Barnston, and S.E. Zebiak, 2005: A statistical assessment of tropical cyclone activity in atmospheric general circulation models. *Tellus A,* **57(4)**, 589-604. doi:10.1111/j.1600-0870.2005.00117

Camargo, S., K.A. Emanuel, and A.H. Sobel, 2006: ENSO and genesis potential index in reanalysis and AGCMs. In: *27th Conference on Hurricanes and Tropical Meteorology*, 24-28 April, 2006, Monterey, CA. American Meteorological Society, Boston, Paper #15C.2. Extended abstract available at http://ams.confex.com/ams/pdfpapers/108038.pdf

Camargo, S.J., A.H. Sobel, A.G. Barnston, and K. A. Emanuel, 2007: Tropical cyclone genesis potential index in climate models. *Tellus A*, **59(4)**, 428-442.

Cassano, E.N., A.H. Lynch, J.J. Cassano, and M.R. Koslow, 2006: Classification of synoptic patterns in the western Arctic associated with extreme events at Barrow, Alaska, USA. *Climate Research,* **30(2),** 83-97.

Cayan, D.R., P.D. Bromirski, K. Hayhoe, M. Tyree, M.D. Dettinger, and R.E. Flick, 2008: Climate change projections of sea level extremes along the California coast. *Climatic Change* (in press).

Chan, J.C.L., 1985: Tropical cyclone activity in the northwest Pacific in relation to the El Niño/Southern Oscillation phenomenon. *Monthly Weather Review,* **113(4):** 599-606.

Chauvin, F., J.-F. Royer and M. Déqué, 2006: Response of hurricane-type vortices to global warming as simulated by ARPEGE-Climat at high resolution. *Climate Dynamics*, **27(4)**, 377-399.

Christensen, J.H. and O.B. Christensen, 2003: Severe summertime flooding in Europe. *Nature,* **421(6925)**, 805-806.

Christensen, J.H., B. Hewitson, A. Busuioc, A. Chen, X. Gao, I. Held, R. Jones, R.K. Kolli, W.-T. Kwon, R. Laprise, V. Magaña Rueda, L. Mearns, C.G. Menéndez, J. Räisänen, A. Rinke, A. Sarr, and P. Whetton, 2007: Regional climate projections. In: *Climate Change 2007: The Physical Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 847-940.

Christensen, O.B. and J.H. Christensen, 2004: Intensification of extreme European summer precipitation in a warmer climate. *Global Planetary Change,* **44(1-4)**, 107-117.

Christidis, N., P.A. Stott, S. Brown, G. Hegerl, and J. Caesar, 2005: Detection of changes in temperature extremes during the second half of the 20th century. *Geophysical Research Letters*, **32**, L20716, doi:10.1029/2005GL023885.

Clark, R., S. Brown, and J. Murphy, 2006: Modelling northern hemisphere summer heat extreme changes and their uncertainties using a physics ensemble of climate sensitivity experiments. *Journal of Climate,* **19(17),** 4418-4435.

Cook, E.R., C.A. Woodhouse, C.M. Eakin, D.M. Meko, and D.W. Stahle, 2004: Long-term aridity changes in the western United States. *Science*, **306(5698)**, 1015-1018.

Corbosiero, K.L. and J. Molinari, 2003: The relationship between storm motion, vertical wind shear, and convective asymmetries in tropical cyclones. *Journal of the Atmospheric Sciences*, **60(2)**, 366-376.

Cubasch, U., G.A. Meehl, G.J. Boer, R.J. Stouffer, M. Dix, A. Noda, C.A. Senior, S. Raper, and K.S. Yap, 2001: Projections of future climate change. In: *Climate Change 2001: The Scientific Basis.* Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T.,Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, pp. 525-582.

Dai, A., K.E. Trenberth, and T. Qian, 2004: A global data set of Palmer Drought Severity Index for 1870-2002: relationship with soil moisture and effects of surface warming. *Journal of Hydrometeorology*, **5(6)**, 1117-1130.

Davis, C.A and L.F. Bosart, 2001: Numerical simulations of the genesis of hurricane Diana (1984). Part I: control simulation. *Monthly Weather Review*, **129(8)**,1859-1881.

Davis, C.A. and L.F. Bosart, 2006: The formation of hurricane Humberto (2001): the importance of extra-tropical precursors. *Quarterly Journal of the Royal Meteorological Society*, **132(619)**, 2055-2085.

Del Genio, A.D., M.-S. Yao, and J. Jonas, 2007: Will moist convection be stronger in a warner climate? *Geophysical Research Letters*, **34**, L16703, doi:10.1029/2007GL030525.

Delworth, T.L., J.D. Mahlman, and T.R. Knutson, 1999: Changes in heat index associated with CO_2-induced global warming. *Climatic Change*, **43**(2), 369-386.

DeMaria, M., 1996: The effect of vertical shear on tropical cyclone intensity change *Journal of the Atmospheric Sciences*, **53(14)**, 2076-2088.

DeMaria, M. and J. Kaplan, 1994: Sea-surface temperature and the maximum intensity of Atlantic tropical cyclones. *Journal of Climate*, **7(9)**, 1324-1334.

Déry, S.J. and E.F. Wood, 2006: Analysis of snow in the 20th and 21st century Geophysical Fluid Dynamics Laboratory coupled climate model simulations. *Journal of Geophysical Research,* **111,** D19113. doi:10.1029/2005JD006920.

Deser, C., A.S. Phillips, and J.W. Hurrell, 2004: Pacific decadal interdecadal climate variability: linkages between the tropics and the North Pacific during boreal winter since 1900. *Journal of Climate*, **17(16)**, 3109-3124.

Donner, S.D., T.R. Knutson, and M. Oppenheimer, 2007: Model-based assessment of the role of human-induced climate change

in the 2005 Caribbean coral bleaching event. *Proceedings of the National Academy of Sciences,* **104(13)**, 5483-5488.

Dunion, J.P and C.S. Velden, 2004: The impact of the Saharan air layer on Atlantic tropical cyclone activity. *Bulletin of the American Meteorological Society*, **85(3)**, 353-365.

Dunn, G.E., 1940: Cyclogenesis in the tropical Atlantic. *Bulletin of the American Meteorological Society*, **21(6)**, 215-229.

Easterling, D.R., G.A. Meehl, C. Parmesan, S.A. Changnon, T.R. Karl, and L.O. Mearns, 2000: Climate extremes: observations, modeling and impacts. *Science*, **289(5487)**, 2068-2074.

Eichler, T. and W. Higgins, 2006: Climatology and ENSO-related variability of North American extratropical cyclone activity. *Journal of Climate,* **19(10),** 2076-2093.

Emanuel, K.A., 1987: The dependence of hurricane intensity on climate. *Nature,* **326(6112),** 483-485.

Emanuel K.A., 1995: Sensitivity of tropical cyclones to surface exchange coefficients and a revised steady-state model incorporating eye dynamics. *Journal of the Atmospheric Sciences*, **52(22)**, 3969-3976.

Emanuel, K., 2000: A statistical analysis of tropical cyclone intensity. *Monthly Weather Review,* **128(4),** 1139-1152.

Emanuel, K.A., 2005: Increasing destructiveness of tropical cyclones over the past 30 years. *Nature,* **436(7051),** 686-688.

Emanuel, K., 2006: Environmental influences on tropical cyclone variability and trends. In *27th Conference on Hurricanes and Tropical Meteorology*, 24-28 April, 2006, Monterey, CA. American Meteorological Society, Boston, Paper #4C.2. Extended abstract available at: http://ams.confex.com/ams/pdfpapers/107575.pdf

Emanuel, K.A., 2007: Environmental factors affecting tropical cyclone power dissipation. *Journal of Climate*, **20(22)**, 5497-5509.

Emanuel, K. and D.S. Nolan, 2004: Tropical cyclone activity and the global climate system. In: *26th Conference on Hurricanes and Tropical Meteorology*, 2-7 May 2004, Miami, FL. American Meteorological Society, Boston, Paper, #10A.2, pp. 240-241. Extrended abstract available at http://ams.confex.com/ams/pdfpapers/75463.pdf

Emanuel, K., S.Ravela, E.Vivant, and C.Risi. 2006: A statistical deterministic approach to hurricane risk assessment. *Bulletin of the American Meteorological Society,*: **87(6)**, 299-314.

Emanuel, K., R. Sundararajan, and J. Williams, 2008: Hurricanes and global warming: results from downscaling IPCC AR4 simulations. Bulletin of the American Meteorological Society, 89(3), 347-367.

Emori, S. and S.J. Brown, 2005: Dynamic and thermodynamic changes in mean and extreme precipitation under changed climate. *Geophysical Research Letters*, **32**, L17706, doi:10.1029/2005GL023272.

Evan, A.T., J. Dunion, J.A. Foley, A.K. Heidinger, and C.S. Velden, 2006: New evidence for a relationship between Atlantic tropical cyclone activity and African dust outbeaks. *Geophysical Research Letters*, **33**, L19813, doi:10.1029/2006GL026408.

Ferreira, R.N. and W.H. Schubert. 1997: Barotropic aspects of ITCZ breakdown. *Journal of the Atmospheric Sciences*, **54(2)**, 261-285.

Fiorino, M. and R.L. Elsberry, 1989: Contributions to tropical cyclone motion by small, medium and large scales in the initial vortex. *Monthly Weather Review,* **117(4)**, 721-727.

Fischer-Bruns, I., H. Von Storch, J.F. Gonzalez-Rouco, and E. Zorita, 2005: Modelling the variability of midlatitude storm activity on decadal to century time scales. *Climate Dynamics,* **25(5)**, 461-476.

Frank, N.L. and G. Clark, 1980: Atlantic tropical systems of 1979. *Monthly Weather Review*, **108(7)**, 966-972.

Frank, W.M. and E.A. Ritchie, 1999: Effects of environmental flow upon tropical cyclone structure. *Monthly Weather Review,* **127(9)**, 2044-2061.

Frei, A. and G. Gong, 2005: Decadal to century scale trends in North American snow extent in coupled atmosphere-ocean general circulation models. *Geophysical Research Letters,* **32,** L18502, doi:10.1029/2005GL023394.

Frei, C., C. Schär, D. Lüthi, and H.C. Davies, 1998: Heavy precipitation processes in a warmer climate. *Geophysical Research Letters,* **25(9)**, 1431-1434.

Frich, P., L.V. Alexander, P. Della-Marta, B. Gleason, M. Haylock, A.M.G.K. Tank, and T. Peterson, 2002: Observed coherent changes in climatic extremes during the second half of the twentieth century. *Climate Research,* **19(3),** 193-212.

Fyfe, J.C., 2003: Extratropical southern hemisphere cyclones: Harbingers of climate change? *Journal of Climate,* **16(17)**, 2802-2805.

Gao, S.B. and H.G. Stefan, 2004: Potential climate change effects on ice covers of five freshwater lakes. *Journal of Hydrologic Engineering,* **9(3),** 226-234.

Gedney, N., P.M. Cox, R.A. Betts, O. Boucher, C. Huntingford, and P.A. Stott, 2006a: Detection of a direct carbon dioxide effect in continental river runoff records. *Nature,* **439(7078)**, 835-838.

Gedney, N., P.M. Cox, R.A. Betts, O. Boucher, C. Huntingford, and P.A. Stott, 2006b: Continental runoff - a quality-controlled global runoff data set - Reply. *Nature,* **444(7120)**, E14-E15. doi:10.1038/nature05481

Gershunov, A. and D.R. Cayan, 2003: Heavy daily precipitation frequency over the contiguous United States: sources of climatic variability and seasonal predictability. *Journal of Climate,* **16(16)**, 2752-2765.

Gillett, N.P., 2005: Northern Hemisphere circulation. *Nature,* **437(7058)**, 496.

Gillett, N.P., G.C. Hegerl, M.R. Allen, and P.A. Stott, 2000: Implications of changes in the Northern Hemispheric circulation for the detection of anthropogenic climate change. *Geophysical Research Letters,* **27(7)**, 993-996.

Gillett, N.P., M.R. Allen, R.E. McDonald, C.A. Senior, D.T. Shindell, and G.A. Schmidt, 2002: How linear is the Arctic Oscillation response to greenhouse gases? *Journal of Geophysical Research,* **107(D3)**, 4022, doi:10.1029/2001JD000589.

Gillett, N.P., H.F. Graf, and T.J. Osborn, 2003: Climate change and the North Atlantic Oscillation. In: *The North Atlantic Oscillation: Climatic Significance and Environmental Impact* [Hurrell, J.W., Y Kushnir, G. Ottersen and M. Visbeck (eds.)]. American Geophysical Union, Washington, DC, pp. 193-209.

Gillett, N.P., A.J. Weaver, F.W. Zwiers, and M.F. Wehner, 2004: Detection of volcanic influence on global precipitation. *Geophysical Research Letters,* **31(12)**, L12217, doi:10.1029/2004GL020044.

Gillett, N. P., R.J. Allan, and T.J. Ansell, 2005: Detection of external influence on sea level pressure with a multi-model

ensemble. *Geophysical Research Letters*, **32(19)**, L19714, doi:10.1029/2005GL023640.

Goldenberg, S.B., C.W. Landsea, A.M. Mesta-Nuñez, and W. M. Gray, 2001: The recent increase in Atlantic hurricane activity: causes and implications. *Science,* **293(5529),** 474-479.

Graham, N.E. and H.F. Diaz, 2001: Evidence for intensification of North Pacific winter cyclones since 1948. *Bulletin of the American Meteorological Society,* **82(9),** 1869-1893.

Gray, W.M., 1968: Global view of the origin of tropical disturbances and storms. *Monthly Weather Review*, **96(10)**, 669-700.

Gray, W.M., 1979: Hurricanes: their formation, structure, and likely role in the tropical circulation. In *Meteorology Over the Tropical Oceans* [Shaw, D. B. (ed.)]. Royal Meteorological Society, Bracknell, UK, pp. 155-218.

Gray, W.M., 1984: Atlantic seasonal hurricane frequency. Part II: forecasting its variability. *Monthly Weather Review*, **112(9)**, 1669-1683.

Gray, W.M., 1990: Strong association between West African rainfall and U.S. landfall of intense hurricanes. *Science,* **249(4974),** 1251-1256.

Groisman, P.Ya., T.R. Karl, D.R. Easterling, R.W. Knight, P.F. Jamason, K.J. Hennessy, R. Suppiah, C.M. Page, J. Wibig, K. Fortuniak, V.N. Razuvaev, A. Douglas, E. Førland, and P.-M. Zhai, 1999: Changes in the probability of heavy precipitation: important indicators of climatic change. *Climatic Change*, **42(1)**, 243-283.

Groisman, P.Ya., R.W. Knight, T.R. Karl, D.R. Easterling, B. Sun, and J.H. Lawrimore, 2004: Contemporary changes of the hydrological cycle over the contiguous United States: trends derived from *in situ* observations. *Journal of Hydrometeorology*, **5(1),** 64-85.

Groisman, P.Ya., R.W. Knight, D.R. Easterling, T.R. Karl, G.C. Hegerl, and V.N. Razuvaev, 2005: Trends in intense precipitation in the climate record. *Journal of Climate*, **18(9)**, 1326-1350.

Gulev, S.K. and V. Grigorieva, 2004: Last century changes in ocean wind wave height from global visual wave data. *Geophysical Research Letters,* **31,** L24302, doi:10.1029/2004FL021040.

Haarsma, R.J., J.F.B. Mitchell, and C.A. Senior, 1993: Tropical disturbances in a GCM. *Climate Dynamics*, **8(5)**, 247-257.

Hasegawa, A. and S. Emori, 2005: Tropical cyclones and associated precipitation over the Western North Pacific: T106 atmospheric GCM simulation for present-day and doubled CO_2 climates. *SOLA,* **1,** 145-148. doi:10.2151/sola.2005-038

Hayhoe, K, C.P. Wake, T.G. Huntington, L.F. Luo, M.D. Schwartz, J. Sheffield, E. Wood, B. Anderson, J. Bradbury, A. DeGaetano, T.J. Troy, and D. Wolfe, 2007: Past and future changes in climate and hydrological indicators in the US Northeast. *Climate Dynamics,* **28(4)**, 381-407.

Hegerl, G.C., F.W. Zwiers, V.V. Kharin, and P.A. Stott, 2004: Detectability of anthropogenic changes in temperature and precipitation extremes. *Journal of Climate,* **17(19)**, 3683-3700.

Hegerl, G.C., F.W. Zwiers, P. Braconnot, N.P. Gillett, Y. Luo, J. Marengo Orsini, N. Nicholls, J.E. Penner, and P.A, Stott, 2007: Understanding and attributing climate change. In: *Climate Change 2007: The Physical Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 663-745.

Held, I.M. and B.J. Soden, 2006: Robust responses of the hydrological cycle to global warming. *Journal of Climate,* **19(21)**, 5686-5699.

Henderson-Sellers, A., H. Zhang, G. Berz, K. Emanuel, W. Gray, C. Landsea, G. Holland, J. Lighthill, S-L. Shieh, P. Webster, and K. McGuffie, 1998: Tropical cyclones and global climate change: a post-IPCC assessment. *Bulletin of the American Meteorological Society,* **79(1)**, 19-38.

Hendricks, E.A., M.T. Montgomery, and C.A. Davis, 2004: The role of "vortical" hot towers in the formation of tropical cyclone Diana (1984). *Journal of the Atmospheric Sciences*, **61(11)**, 1209-1232.

Hodgkins, G.A., I.C. James, and T.G. Huntington, 2002: Historical changes in lake ice-out dates as indicators of climate change in New England, 1850-2000. *International Journal of Climatology,* **22(15)**, 1819-1827.

Hodgkins, G.A., R.W. Dudley, and T. G. Huntington, 2003: Changes in the timing of high river flows in New England over the 20th century. *Journal of Hydrology,* **278(1-4),** 244-252.

Hoegh-Guldberg, O., 1999: Climate change, coral bleaching and the future of the world's coral reefs. *Marine and Freshwater Research*, **50(8)**, 839-66.

Hoegh-Guldberg, O., 2005: Marine ecosystems and climate change. In: *Climate Change and Biodiversity* [Lovejoy, T.E. and L. Hannah (eds.)]. Yale University Press, New Haven, CT, pp. 256-271.

Hoerling, M.P. and A. Kumar, 2003: The perfect ocean for drought. *Science,* 299(5607), 691-694.

Hoerling, M.P., J.W. Hurrell, T. Xu, G.T. Bates, and A.S. Phillips, 2005: Twentieth century North Atlantic climate change. Part II: Understanding the effect of Indian Ocean warming. *Climate Dynamics*, **23(3-4)**, 391-405.

Hoerling, M., J. Eischeid, X. Quan, and T.Y. Xu, 2007: Explaining the record US warmth of 2006. *Geophysical Research Letters*, **24**, L17704, doi:10.1029/2007GL030643.

Holland, G.J., 1984: Tropical cyclone motion. a comparison of theory and observation. *Journal of the Atmospheric Sciences*, **41(1)**, 68-75.

Holland, G.J., 1995: Scale interaction in the western Pacific monsoon. *Meteorological and Atmospheric Physics*, **56(1-2)**, 57-79.

Holland, G.J., 1997: The maximum potential intensity of tropical cyclones. *Journal of the Atmospheric Sciences,* **54(21)**, 2519-2541.

Holland, G.J., 2007: Misuse of landfall as a proxy for Atlantic tropical cyclone activity. *EOS, Transactions of the American Geophysical Union*, **88(36)**, 349-350.

Holland, G.J. and P.J. Webster, 2007: Heightened tropical cyclone activity in the North Atlantic: natural variability or climate trend? *Philosophical Transactions of the Royal Society Series A*, **365(1860)**, 2695-2716. doi:10.1098/rsta.2007.2083

Holland, M.M., C.M. Bitz, and B. Tremblay, 2006: Future abrupt reductions in the summer Arctic sea ice. *Geophysical Research Letters,* **33,** L23503, doi:10.1029/2006GL028024.

Houze, R.A., Jr., 1977: Structure and dynamics of a tropical squall-line system. *Monthly Weather Review*, **105(12)**, 1540-1567.

Huntington, T.G., G.A. Hodgkins, and R.W. Dudley, 2003: Historical trend in river ice thickness and coherence in hydroclimatological trends in Maine. *Climatic Change,* **61(1-2),** 217-236.

Hurrell, J.W., 1995: Decadal trends in the North-Atlantic oscillation - regional temperatures and precipitation. *Science,* **269(5224),** 676-679.

Hurrell, J.W., 1996: Influence of variations in extratropical wintertime teleconnections on Northern Hemisphere temperature. *Geophysical Research Letters,* **23(6)**, 665-668.

Hurrell, J.W., M.P. Hoerling, A.S. Phillips, and T. Xu, 2005: Twentieth century North Atlantic climate change. Part I: Assessing determinism. *Climate Dynamics*, **23(3-4)**, 371-389.

IADAG (International Ad Hoc Detection and Attribution Group), 2005: Detecting and attributing external influences on the climate system: a review of recent advances. *Journal of Climate*, **18(9)**, 1291-1314.

IPCC (Intergovernmental Panel on Climate Change), 2001. *Climate Change 2001: The Scientific Basis.* Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J. T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, UK, and New York, 881 pp.

IPCC (Intergovernmental Panel on Climate Change), 2007: Summary for policymakers. In: *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 1-18.

Jagger, T.H. and J.B. Elsner, 2006: Climatology models for extreme hurricane winds near the United States. *Journal of Climate*, **19(13)**, 3220-3236.

Jones, S.C., P.A. Harr, J. Abraham, L.F. Bosart, P.J. Bowyer, J.L. Evans, D.E. Hanley, B.N. Hanstrum, R.E. Hart, F. Lalaurette, M.R. Sinclair, R.K. Smith, and C. Thorncroft, 2003: The extratropical transition of tropical cyclones: forecast challenges, current understanding, and future directions. *Weather and Forecasting*, **18(6)**, 1052-1092.

Karl, T.R. and R.W. Knight, 1997: The 1995 Chicago heat wave: How likely is a recurrence? *Bulletin of the American Meteorological Society,* **78(6),** 1107-1119.

Karl, T.R. and R.W. Knight, 1998: Secular trends of precipitation amount, frequency, and intensity in the USA. *Bulletin of the American Meteorological Society*, **79(2)**, 231-241.

Karl, T.R. and K.E. Trenberth, 2003: Modern global climate change. *Science*, **302(5651)**, 1719-1723.

Karoly, D.J. and Q. Wu, 2005: Detection of regional surface temperature trends. *Journal of Climate*, **18(21),** 4337-4343.

Karoly, D.J., K.Braganza, P.A. Stott, J.M. Arblaster, G.A. Meehl, A.J. Broccoli, and K.W. Dixon, 2003: Detection of a human influence on North American climate. *Science,* **302(5648)**, 1200-1203.

Katz, R.W., 1999: Extreme value theory for precipitation: sensitivity analysis for climate change. *Advances in Water Researches,* **23(2)**, 133-139.

Katz, R.W. and B.G. Brown, 1992: Extreme events in a changing climate: variability is more important than averages. *Climatic Change*, **21(3)**, 289-302.

Kenyon, J. and G.C. Hegerl, 2008: Influence of modes of climate variability on global temperature extremes. Journal of Climate, Early online release doi:10.1175/2008JCLI2125.1.

Kharin, V.V. and F.W. Zwiers, 2005: Estimating extremes in transient climate change simulations. *Journal of Climate,* **18(8),** 1156-1173.

Kharin, V., F.W. Zwiers, X. Zhang and G.C. Hegerl, 2007: Changes in temperature and precipitation extremes in the IPCC ensemble of global coupled model simulations. *Journal of Climate*, **20(8)**, 1419-1444.

Kiktev, D., D. Sexton, L. Alexander, and C. Folland, 2003: Comparison of modelled and observed trends in indices of daily climate extremes. *Journal of Climate,* **16(22),** 3560-3571.

Knutson, T.R. and R.E. Tuleya, 1999: Increased hurricane intensities with CO_2-induced warming as simulated using the GFDL hurricane prediction system. *Climate Dynamics*, **15(7)**, 503-519.

Knutson, T.R. and R.E. Tuleya, 2004: Impact of CO_2-induced warming on simulated hurricane intensity and precipitation: sensitivity to the choice of climate model and convective parameterization. *Journal of Climate,* **17(18)**, 3477-3495.

Knutson, T.R. and R.E. Tuleya, 2008: Tropical cyclones and climate change: revisiting recent studies at GFDL. In *Climate Extremes and Society* [Diaz, H. and R. Murnane (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 120-144.

Knutson, T.R., R.E. Tuleya, and Y. Kurihara, 1998: Simulated increase of hurricane intensities in a CO2-warmed climate. *Science*, **279(5353)**, 1018-1020.

Knutson, T.R., R.E. Tuleya, W. Shen, and I. Ginis, 2001: Impact of CO_2-induced warming on hurricane intensities as simulated in a hurricane model with ocean coupling. *Journal of Climate,* **14(11)**, 2458-2468.

Knutson, T.R., T.L. Delworth, K.W. Dixon, I.M. Held, J. Lu, V. Ramaswamy, D. Schwarzkopf, G. Stenchikov, and R.J. Stouffer, 2006: Assessment of twentieth-century regional surface temperature trends using the GFDL CM2 coupled models. *Journal of Climate,* **19(9)**, 1624-1651.

Knutson, T.R., J.J. Sirutis, S.T. Garner, I.M. Held, and R.E. Tuleya, 2007: Simulation of the recent multidecadal increase of Atlantic hurricane activity using an 18-km grid regional model. *Bulletin of the American Meteorological Society*, **88(10)**, 1549-1565.

Kossin, J.P. and D.J. Vimont, 2007: A more general framework for understanding Atlantic hurricane variability and trends. *Bulletin of the American Meteorological Society*, **88(11)**, 1767-1781.

Kumar, A., F. Yang, L. Goddard, and S. Schubert, 2004: Differing trends in the tropical surface temperatures and precipitation over land and oceans. *Journal of Climate,* **17(3)**, 653-664.

Kunkel, K.E., N.E. Westcott, and D.A.R. Kristovich, 2002: Assessment of potential effects of climate change on heavy lake-effect snowstorms near Lake Erie. *Journal of Great Lakes Research,* **28(4),** 521-536.

Kunkel, K.E., X.-Z. Liang, J. Zhu, and Y. Lin, 2006: Can CGCMS simulate the twentieth century "warming hole" in the central United States? *Journal of Climate,* **19(7)**, 4137-4153.

Lambert, F.H., P.A. Stott, M.R. Allen, and M.A. Palmer, 2004: Detection and attribution of changes in 20th century land precipitation. *Geophysical Research Letters,* **31(10)**, L10203, doi:10.1029/2004GL019545

Lambert, S.J. and J.C. Fyfe, 2006: Changes in winter cyclone frequencies and strengths simulated in enhanced greenhouse warming experiments: results from the models participating in the IPCC diagnostic exercise. *Climate Dynamics,* **26(7-8)**, 713-728. doi:10.1007/s00382-006-0110-3

Lander, M.A., 1994a: Description of a monsoon gyre and its effects on the tropical cyclones in the western North Pacific during August 1991. *Weather and Forecasting*, **9(4)**, 640-654.

Lander, M.A., 1994b: An exploratory analysis of the relationship between tropical storm formation in the western North Pacific and ENSO. *Monthly Weather Review*, **122(4)**, 636-651.

Leung, L.R., Y. Qian, X.D. Bian, W.M. Washington, J.G. Han, and J.O. Roads, 2004: Mid-century ensemble regional climate change scenarios for the western United States. *Climatic Change,* **62(1-3),** 75-113.

Liebmann, B., H.H. Hendon, and J.D. Glick, 1994: The relationship between tropical cyclones of the western Pacific and Indian Oceans and the Madden-Julian oscillation. *Journal of the Meteorological Society of Japan,* **72(3)**, 401-412.

Liu, G., A.E. Strong, W. Skirving, and L.F. Arzayus, 2006: Overview of NOAA Coral Reef Watch Program's near-real-time satellite global coral bleaching monitoring activities. In: *Proceedings of the 10th International Coral Reef Symposium*, 28 June - 2 July, 2004, Okinawa. Japanese Coral Reef Society, Tokyo, pp. 1783-1793.

Lozano, I. and V. Swail, 2002: The link between wave height variability in the North Atlantic and the storm track activity in the last four decades. *Atmosphere-Ocean,* **40(4),** 377-388.

Lynch, A.H., J.A. Curry, R.D. Brunner, and J.A. Maslanik, 2004: Toward an integrated assessment of the impacts of extreme wind events on Barrow, Alaska. *Bulletin of the American Meteorological Society,* **85(2),** 209-221.

Maloney, E.D. and D.L. Hartmann, 2000: Modulation of hurricane activity in the Gulf of Mexico by the Madden-Julian oscillation. *Science*, **287(5460)**, 2002-2004.

Manabe, S. and R.J. Stouffer, 1980: Sensitivity of a global climate model to an increase of CO_2 concentration in the atmosphere. *Journal of Geophysical Research*, **85(C10)**, 5529-5554.

Manabe, S., Wetherald R.T., Stouffer, R.J., 1981: Summer dryness due to an increase of atmospheric CO_2 concentration. *Climate Change,* **3(4)**, 347-386.

Mann, M. and K. Emanuel, 2006: Atlantic hurricane trends linked to climate change. *EOS, Transactions of the American Geophysical Union*, **87(24)**, 233, 238, 241.

Marchok, T., R. Rogers, and R. Tuleya, 2007: Validation schemes for tropical cyclone quantitative precipitation forecasts: evaluation of operational models for U.S. landfalling cases. *Weather and Forecasting*, **22(4),** 726-746.

Mars, J.C., and D.W. Houseknecht, 2007: Quantitative remote sensing study indicates doubling of coastal erosion rate in past 50 yr along a segment of the Arctic coast of Alaska. *Geology,* **35(7),** 583-586.

Marsh, P.T., H.E. Brooks, and D.J. Karoly, 2007: Assessment of the severe weather environment in North America simulated by a global climate model. Atmospheric Science Letters, 8(4), 100-106.

McCabe, G.J., M.P. Clark, and M.C. Serreze, 2001: Trends in Northern Hemisphere surface cyclone frequency and intensity. *Journal of Climate*, **14(12)**, 2763-2768.

McDonald, R.E., D.G. Bleaken, D.R. Cresswell, V.D. Pope, and C.A. Senior, 2005: Tropical storms: representation and diagnosis in climate models and the impacts of climate change. *Climate Dynamics,* **25(1)**, 19-36. doi:10.1007/s00382-004-0491-0

Mearns, L.O., R.W. Katz, and S.H. Schneider, 1984: Extreme high temperature events: changes in their probabilites with changes in mean temperature. *Journal of Climate and Applied Meteorology*, **23(12)**, 1601-1613.

Meehl, G.A. and C. Tebaldi, 2004: More intense, more frequent, and longer lasting heat waves in the 21st century. *Science,* **305(5686)**, 994-997.

Meehl, G.A., C. Tebaldi, and D. Nychka, 2004: Changes in frost days in simulations of twenty-first century climate. *Climate Dynamics,* **23(5)**, 495-511.

Meehl, G.A., J.M. Arblaster, and C. Tebaldi, 2005: Understanding future patterns of precipitation extremes in climate model simulations. *Geophysical Research Letters*, **32**, L18719, doi:10.1029/2005GL023680

Meehl, G.A., W.M. Washington, B.D. Santer, W.D. Collins, J.M. Arblaster, A. Hu, D.M. Lawrence, H. Teng, L.E. Buja, and W.G. Strand 2006: Climate change projections for the twenty-first century and climate change commitment in the CCSM3. *Journal of Climate*, **19(11)**, 2597-2616.

Meehl, G.A., T.F. Stocker, W.D. Collins, P. Friedlingstein, A.T. Gaye, J.M. Gregory, A. Kitoh, R. Knutti, J.M. Murphy, A. Noda, S.C.B. Raper, I.G. Watterson, A.J. Weaver, and Z.-C. Zhao, 2007a: Global climate projections. In: *Climate Change 2007: The Physical Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 747-845.

Meehl, G.A., J.M. Arblaster, and C. Tebaldi, 2007b: Contributions of natural and anthropogenic forcing to changes in temperature extremes over the U.S. *Geophysical Research Letters* **34**, L19709, doi:10.1029/2007GL030948.

Meehl, G.A., C. Tebaldi, H. Teng, and T.C. Peterson, 2007c: Current and future U.S. weather extremes and El Niño. *Geophysical Research Letters,* **34**, L20704, doi:10.1029/2007GL031027.

Mendelssohn, R., S.J. Bograd, F.B. Schwing, and D.M. Palacios, 2005: Teaching old indices new tricks: A state-space analysis of El Niño related climate indices. *Geophysical Research Letters,* **32**, L07709.

Merryfield, W.J., 2006: Changes to ENSO under CO_2 doubling in a multimodel ensemble. *Journal of Climate,* **19(16)**, 4009-4027.

Miller, N.L. and N.J. Schlegel, 2006: Climate change projected fire weather sensitivity: California Santa Ana wind occurrence. *Geophysical Research Letters*, **33(15)**, L15711, doi:10.1029/2006GL025808.

Miller, N.L., K.E. Bashford, and E. Strem, 2003: Potential impacts of climate change on California hydrology. *Journal of the American Water Resources Association,* **39(4),** 771-784.

Milly, P.C.D., R.T. Wetherald, K.A. Dunne, and T.L. Delworth, 2002: Increasing risk of great floods in a changing climate. *Nature*, **415(6871)**, 514-517.

Milly, P.C.D., K.A. Dunne, and A.V. Vecchia, 2005: Global pattern of trends in streamflow and water availability in a changing climate. *Nature*, **438(7066)**, 347-350.

Molinari, J. and D. Vollaro, 2000: Planetary and synoptic-scale influence on eastern Pacific tropical cyclogenesis. *Monthly Weather Review*, **128(9)**, 3296-3307.

Montgomery, M.T., M.E. Nicholls, T.A. Cram, and A.B. Saunders, 2006: A vortical hot tower route to tropical cyclogenesis. *Journal of the Atmospheric Sciences*, **63(1)**, 355-386.

Morris, K., M. Jeffries, and C. Duguay, 2005: Model simulation of the effects of climate variability and change on lake ice in central Alaska, USA. *Annals of Glaciology,* **40(1)**,113-118.

Neal, A.B. and G.J. Holland, 1976: *The Australian Tropical Cyclone Forecasting Manual.* Bureau of Meteorology, Melbourne, Victoria, Australia, 274 pp.

Neelin, J.D., M. Münnich, H. Su, J.E. Meyerson, and C. Holloway, 2006: Tropical drying trends in global warming models and observations. *Proceedings of the National Academy of Sciences,* **103(16)**, 6110-6115.

Neu, H.J.A., 1984: Interannual variations and longer-term changes in the sea state of the North Atlantic from 1970 to 1982. *Journal of Geophysical Research*, **89(C4)**: 6397-6402.

Nolan, D.S., E.D. Rappin, and K.A. Emanuel, 2006: Could hurricanes form from random convection in a warmer world? In: *27th Conference on Hurricanes and Tropical Meteorology*, 24-28 April, 2006, Monterey, CA. American Meteorological Society, Boston, Paper 1C.8. Extended abstract available at: http://ams.confex.com/ams/pdfpapers/107936.pdf.

Oouchi, K., J.Yoshimura, H. Yoshimura, R. Mizuta, S. Kusunoki, and A. Noda, 2006: Tropical cyclone climatology in a global-warming climate as simulated in a 20km-mesh global atmospheric model: frequency and wind intensity analysis. *Journal of the Meteorological Society of Japan*, **84(2)**, 259-276.

Osborn, T.J., 2004: Simulating the winter North Atlantic Oscillation: the roles of internal variability and greenhouse gas forcing. *Climate Dynamics,* **22(6-7)**, 605-623.

Osborn, T.J. and M. Hulme, 1997: Development of a relationship between station and grid-box rainday frequencies for climate model evaluation. *Journal of Climate*, **10(8)**, 1885-1908.

Osborn, T.J., K.R. Briffa, S.F.B. Tett, P.D. Jones, and R.M. Trigo, 1999: Evaluation of the North Atlantic Oscillation as simulated by a coupled climate model. *Climate Dynamics,* **15(9)**, 685-702.

Ostermeier, G.M. and J.M. Wallace, 2003: Trends in the North Atlantic Oscillation-Northern Hemisphere annular mode during the twentieth century. *Journal of Climate,* **16(2)**, 336-341.

Paciorek, C.J., J.S. Risbey, V. Ventura, and R.D. Rosen, 2002: Multiple indices of Northern Hemisphere cyclone activity, winters 1949-99. *Journal of Climate,* **15(13)**, 1573-1590.

Pal, J.S., F. Giorgi, and X. Bi, 2004: Consistency of recent European summer precipitation trends and extremes with future regional climate projections. *Geophysical Research Letters*, **31**, L13202, doi:10.1029/2004GL019836.

Pall, P., M.R. Allen, and D.A. Stone, 2007: Testing the Clausius-Clapeyron constraint on changes in extreme precipitation under CO_2 warming . *Climate Dynamics,* **28(4)**, 351-363.

Palmer, T.N. and J. Räisänen, 2002: Quantifying the risk of extreme seasonal precipitation events in a changing climate. *Nature*, **415(6871)**, 514-517.

Pasch, R.J., L.A. Avila, and J-G. Jiing, 1998: Atlantic tropical systems of 1994 and 1995: a comparison of a quiet season to a near-record-breaking one. *Monthly Weather Review*, **126(5)**, 1106-1123.

Peel, M.C. and T.A. McMahon, 2006: A quality-controlled global runoff data set. *Nature,* **444(7120)**, E14. doi:10.1038/nature05480

Peterson, T.C., X. Zhang, M. Brunet-India, and J.L. Vázquez-Aguirre, 2008: Changes in North American extremes derived from daily weather data. Journal Geophysical Research, 113, D07113, doi:10.1029/2007JD009453.

Pinto, J.G., U. Ulbrich, G.C. Leckebusch, T. Spangehl, M. Reyers, and S. Zacharias, 2007: Changes in storm track and cyclone activity in three SRES ensemble experiments with the ECHAM5/MPI-OM1 GCM. *Climate Dynamics,* **29(2-3)**, 195-210. doi:10.1007/s00382-007-0230-4

Price, J.F., 1981: Upper ocean response to a hurricane. *Journal of Physical Oceanography*, **11(2)**, 153-175.

Qian, T., A. Dai, K.E. Trenberth, and K.W. Oleson, 2006: Simulation of global land surface conditions from 1948 to 2002: Part I: forcing data and evaluations. *Journal of Hydrometeorology*, **7(5)**, 953-975.

Räisänen, J., 2005: Impact of increasing CO_2 on monthly-to-annual precipitation extremes: analysis of the CMIP2 experiments. *Climate Dynamics*, **24(2-3)**, 309-323.

Randall, D.A., R.A. Wood, S. Bony, R. Colman, T. Fichefet, J. Fyfe, V. Kattsov, A. Pitman, J. Shukla, J. Srinivasan, R.J. Stouffer, A. Sumi, and K.E. Taylor, 2007: Climate models and their evaluation. In: *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 589-662.

Ritchie, E.A., 2003: Some aspects of midlevel vortex interaction in tropical cyclogenesis. In: *Cloud Systems, Hurricanes, and the Tropical Rainfall Measuring Mission (TRMM)–A Tribute to Dr. Joanne Simpson* [Tao, W.-K. and R. Adler (eds.)]. Meteorological Monograph, 29(51), American Meteorological Society, Boston, MA, pp. 165-174.

Ritchie, E.A. and G.J. Holland, 1997: Scale interactions during the formation of typhoon Irving. *Monthly Weather Review*, **125(7)**, 1377-1396.

Ritchie, E.A. and G.J. Holland, 1999: Large-scale patterns associated with tropical cyclogenesis in the western Pacific. *Monthly Weather Review*, **127(9)**, 2027-2043.

Rosenzweig, C., G. Casassa, D.J. Karoly, A. Imeson, C. Liu, A. Menzel, S. Rawlins, T.L. Root, B. Seguin, and P. Tryjanowski, 2007: Assessment of observed changes and responses in natural and managed systems. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability.* Contribution of Working Group

II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Parry, M.L., O.F. Canziani, J.P. Palutikof, P.J. van der Linden, and C.E. Hanson, (eds)]. Cambridge University Press, Cambridge, UK, and New York, pp. 79-131.

Rotunno, R. and K.A. Emanuel, 1987: An air-sea interaction theory for tropical cyclones. Part II: evolutionary study using a nonhydrostatic axisymmetric numerical model. *Journal of the Atmospheric Sciences*, **44(3)**, 542-561.

Rowell, D.P., and R.G. Jones, 2006: Causes and uncertainty of future summer drying over Europe. *Climate Dynamics*, **27(2-3)**, 281-299.

Royer. J.-F., F. Chauvin, B. Timbal, P. Araspin, and D. Grimal, 1998: A GCM study of the impact of greenhouse gas increase on the frequency of occurrence of tropical cyclones. *Climatic Change*, **38(3),** 307-343.

Ryan, B.F., I.G. Watterson, and J.L. Evans, 1992: Tropical cyclones frequencies inferred from Gray's yearly genesis parameter: validation of GCM tropical climate. *Geophysical Research Letters,* **19(18)**, 1831-1834.

Santer, B.D., T.M.L. Wigley, P.J. Gleckler, C. Bonfils, M.F. Wehner, K. AchutaRao, T.P. Barnett, J.S. Boyle, W. Brüggemann, M. Fiorino, N. Gillett, J.E. Hansen, P.D. Jones, S.A. Klein, G.A. Meehl, S.C.B. Raper, R.W. Reynolds, K.E. Taylor, and W.M. Washington, 2006: Forced and unforced ocean temperature changes in Atlantic and Pacific tropical cyclogenesis regions. *Proceedings of the National Academy of Sciences*, **103(38)**, 13905-13910. doi:10.1073/pnas.0602861103

Santer, B.D., C. Mears, F.J. Wentz, K.E. Taylor, P.J. Gleckler, T.M.L. Wigley, T.P. Barnett, J.S. Boyle, W. Brüggemann, N.P. Gillett, S.A. Klein, G.A. Meehl, T. Nozawa, D.W. Pierce, P.A. Stott, W.M. Washington, and M.F. Wehner, 2007: Identification of human-induced changes in atmospheric moisture content. *Proceedings of the National Academy of Sciences*, **104(39)**, 15248-15253.

Scaife, A.A., J.R. Knight, G.K. Vallis, and C.K. Folland, 2005: A stratospheric influence on the winter NAO and North Atlantic surface climate. *Geophysical Research Letters*, **32**, L18715, doi:10.1029/2005GL023226.

Schade, L.A. and K.A. Emanuel, 1999: The ocean's effect on the intensity of tropical cyclones: results from a simple coupled atmosphere-ocean model. *Journal of the Atmospheric Sciences*, **56(4)**, 642-651.

Schär, C., P.L. Vidale, D. Lüthi, C. Frei, C. Häberli, M.A. Liniger, and C. Appenzeller, 2004: The role of increasing temperature variability in European summer heat waves. *Nature,* **427(6972)**, 332-336.

Schubert, W.H., P.E. Ciesielski, D.E. Stevens, and H-C. Kuo, 1991: Potential vorticity modeling of the ITCZ and the Hadley circulation. *Journal of the Atmospheric Sciences*, **48(12)**, 1493-1509.

Schubert, S.D., M.J. Suarez, P.J. Region, R.D. Koster, and J.T. Bacmeister, 2004: Causes of long term drought in the U. S. Great Plains. *Journal of Climate*, **17(3)**, 485-503.

Seager, R., Y. Kushnir, C. Herweijer, N. Naik, and J. Velez, 2005: Modeling of tropical forcing of persistent droughts and pluvials over western North America: 1856-2000. *Journal of Climate*, **18(19)**, 4065-4088.

Semenov, V.A. and L. Bengtsson, 2002: Secular trends in daily precipitation characteristics: greenhouse gas simulation with a coupled AOGCM. *Climate Dynamics*, **19(2)**, 123-140.

Shapiro, L.J., 1982: Hurricane climatic fluctuations. Part II: relation to large-scale circulation. *Monthly Weather Review*, **110(8)**, 1014-1023.

Shapiro, L.J. and S.B. Goldenberg, 1998: Atlantic sea surface temperatures and tropical cyclone formation. *Journal of Climate*, **11(4)**, 578-590.

Shiogama, H., M. Watanabe, M. Kimoto, and T. Nozawa, 2005: Anthropogenic and natural forcing impacts on ENSO-like decadal variability during the second half of the 20th century. *Geophysical Research Letters,* **32**, L21714, doi:10.1029/2005GL023871.

Simpson, J., E.A. Ritchie, G.J. Holland, J. Halverson, and S. Stewart, 1997: Mesoscale interactions in tropical cyclogenesis. *Monthly Weather Review*, **125(10)**, 2643-2661.

Stone, D.A. and A.J. Weaver, 2002: Daily maximum and minimum temperature trends in a clime model. *Geophysical Research Letters*, **29(9)**, 1356, doi:10.1029/2001GL014556.

Stott, P.A., 2003: Attribution of regional-scale temperature changes to anthropogenic and natural causes. *Geophysical Research Letters,* **30(14)**, 1724, doi:10.1029/2003GL017324.

Stott, P.A. and S.F.B. Tett, 1998: Scale-dependent detection of climate change. *Journal of Climate,* **11(12)**, 3282-3294.

Stott, P.A., D.A. Stone, and M.R. Allen, 2004: Human contribution to the European heatwave of 2003. *Nature*, **432(7017)**, 610-614.

Strong, A.E., F. Arzayus, W. Skirving, and S.F. Heron, 2006: Identifying coral bleaching remotely via coral reef watch-improved integration and implications for changing climate. In: *Corals and Climate Change: Science and Management* [Phinney, J.T., A. Strong, W. Skrving, J. Kleypas, and O. Hoegh-Guldberg, (eds.)]. Coastal and Estuarine Studies 61, American Geophysical Union, Washington DC, pp. 163-180.

Sugi, M., A. Noda, and N. Sato, 2002: Influence of global warming on tropical cyclone climatology: an experiment with the JMA global model. *Journal of the Meteorological Society of Japan,* **80(2)**, 249-272. doi:10.2151/jmsj.80.249

Tebaldi, C., K. Hayhoe, J.M. Arblaster, and G.A. Meehl, 2006: Going to the extremes. *Climatic Change,* **79(3-4),** 185-211.

Thompson, D.W.J. and J.M. Wallace, 1998: The Arctic oscillation signature in the wintertime geopotential height and temperature fields. *Geophysical Research Letters,* **25(9)**, 1297-1300.

Thompson, D.W.J. and J.M. Wallace, 2001: Regional climate impacts of the Northern Hemisphere annular mode. *Science*, **293(5527)**, 85-89.

Thompson, D., J.M. Wallace, and G.C. Hegerl, 2000: Annular modes in the extratropical circulation: Part II, trends. *Journal of Climate,* **13(5)**, 1018-1036.

Thorncroft, C. and K. Hodges, 2001: African easterly wave variability and its relationship to Atlantic tropical cyclone activity. *Journal of Climate*, **14(6)**, 1166-1179.

Timmermann, A., J. Oberhuber, A. Bacher, M. Esch, M. Latif, And E. Roeckner, 1999: Increased El Niño frequency in a climate model forced by future greenhouse warming. *Nature*, **398(6729)**, 694-696.

Tonkin, H., G.J. Holland, N. Holbrook, and A. Henderson-Sellers, 2000: An evaluation of thermodynamic estimates of climatological maximum potential tropical cyclone intensity. *Monthly Weather Review,* **128(3)**, 746-762.

Trapp, R.J., N.S. Diffenbaugh, H.E. Brooks, M.E. Baldwin, E.D. Robinson, and J.S. Pal, 2007: Changes in severe thunderstorm frequency during the 21st century caused by anthropogenically enhanced global radiative forcing. Proceedings of the National Academies of Science, 140(50, 19719-19723.

Trenberth, K., 1999: Conceptual framework for changes of extremes of the hydrological cycle with climate change. *Climatic Change*, **42(1)**, 327-339.

Trenberth, K.E. and D.J. Shea, 2006: Atlantic hurricanes and natural variability in 2005. *Geophysical Research Letters,* **33,** L12704, doi:10.1029/2006GL026894.

Trenberth, K.E., J. Fasullo, and L. Smith, 2005: Trends and variability in column-integrated atmospheric water vapor. *Climate Dynamics,* **24(7-8)**, 741-758.

Trenberth, K.E., P.D. Jones, P. Ambenje, R. Bojariu, D. Easterling, A. Klein Tank, D. Parker, F. Rahimzadeh, J.A. Renwick, M. Rusticucci, B. Soden, and P. Zhai, 2007: Observations: surface and atmospheric climate change. In: *Climate Change 2007: The Physical Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, pp. 235-335.

Tsutsui, J., 2002: Implications of anthropogenic climate change for tropical cyclone activity: a case study with the NCAR CCM2. *Journal of the Meteorological Society of Japan*, **80(1),** 45-65. doi:10.2151/jmsj.80.45

Vavrus, S.J., J.E. Walsh, W.L. Chapman, and D. Portis, 2006: The behavior of extreme cold air outbreaks under greenhouse warming. *International Journal of Climatology,* **26(9)**, 1133-1147.

Vecchi, G.A. and B.J. Soden, 2007: Increased tropical Atlantic wind shear in model projections of global warming. *Geophysical Research Letters*, **34,** L08702, doi:10.1029/2006GL028905.

Vecchi, G.A. and T.R. Knutson, 2008: On estimates of historical North Atlantic tropical cyclone activity. Journal of Climate, Early online release doi:10.1175/2008JCLI2178.1.

Vitart, F. and J. L. Anderson, 2001: Sensitivity of Atlantic tropical storm frequency to ENSO and interdecadal variability of SSTs in an ensemble of AGCM integrations. *Journal of Climate,* **14**(4), 533-545.

Vitart, F., J.L. Anderson, and W.F. Stern, 1997: Simulation of inter-annual variability of tropical storm frequency in an ensemble of GCM integrations. *Journal of Climate*, **10(4)**, 745-760.

Vitart, F., J.L. Anderson, J. Sirutis, and R.E. Tuleya, 2001: Sensitivity of tropical storms simulated by a general circulation model to changes in cumulus parametrization. *Quarterly Journal of the Royal Meteorological Society,* **127(571)**, 25-51.

Voss, R., W. May, and E. Roeckner, 2002: Enhanced resolution modeling study on anthropogenic climate change: changes in the extremes of the hydrological cycle. *International Journal of Climatology*, **22(7)**, 755-777.

Wang, B. and J.C.L. Chan, 2002: How strong ENSO events affect tropical storm activity over the western North Pacific. *Journal of Climate*, **15(13)**, 1643-1658.

Wang, G., 2005: Agricultural drought in a future climate: Results from 15 global climate models participating in the IPCC 4th assessment. *Climate Dynamics*, **25(7-8)**, 739-753.

Wang, X.L., F.W. Zwiers, and V.R. Swail, 2004: North Atlantic ocean wave climate change scenarios for the twenty-first century. *Journal of Climate,* **17(12)**, 2368-2383.

Wang X.L., V.R. Swail, and F.W. Zwiers, 2006: Climatology and changes of extra-tropical storm tracks and cyclone activity: Comparison of ERA-40 with NCEP/NCAR Reanalysis for 1958-2001. *Journal of Climate*, **19(13)**, 3145-3166.

Wang, Y., 2002: Vortex Rossby waves in a numerically simulated tropical cyclone. Part II: the role in tropical cyclone structure and intensity changes. *Journal of the Atmospheric Sciences*, **59(7)**, 1239-1262.

Wang, Y., J.D. Kepert, and G.J. Holland, 2001; The effect of sea spray evaporation on tropical cyclone boundary layer structure and intensity. *Monthly Weather Review*, **129(10)**, 2481-2500.

WASA Group (Waves and Storms in the North Atlantic), 1998: Changing waves and storms in the northeast Atlantic? *Bulletin of the American Meteorological Society*, **79(5)**, 741-760.

Watterson, I.G., 2005: Simulated changes due to global warming in the variability of precipitation, and their interpretation using a gamma-distributed stochastic model. *Advances in Water Resources*, **28(12)**, 1368-1381.

Watterson, I.G. and M.R. Dix, 2003: Simulated changes due to global warming in daily precipitation means and extremes and their interpretation using the gamma distribution. *Journal of Geophysical Research*, **108(D13)**, 4379, doi:10.1029/2002JD002928

Webster, P.J. and H-R. Chang, 1988: Equatorial energy accumulation and emanation regions: impacts of a zonally varying basic state. *Journal of the Atmospheric Sciences*, **45(5)**, 803-829.

Webster, P.J., G.J. Holland, J.A. Curry, and H.-R. Chang, 2005: Changes in tropical cyclone number, duration, and intensity in a warming environment. *Science,* **309(5742)**, 1844-1846.

Wehner, M., 2005: Changes in daily precipitation and surface air temperature extremes in the IPCC AR4 models. *US CLIVAR Variations*, **3(3)**, 5-9.

Weisheimer, A. and T.N. Palmer, 2005: Changing frequency of occurrence of extreme seasonal-mean temperatures under global warming. *Geophysical Research Letters,* **32,** L20721, doi:10.1029/2005GL023365.

Wentz, F. J., L. Ricciardulli, K. Hilburn, and C. Mears, 2007: How much more rain will global warming bring? *Science*, **317(5835)**, 233-235. doi: 10.1126/science.1140746

Wettstein, J.J. and L.O. Mearns, 2002: The influence of the North Atlantic-Arctic Oscillation on mean, variance, and extremes of temperature in the northeastern United States and Canada. *Journal of Climate,* **15(24)**, 3586-3600.

Whitney, L.D. and J.S. Hobgood, 1997: The relationship between sea surface tempertures and maximum intensities of tropical cyclones in the eastern North Pactific Ocean. *Journal of Climate*, **10(11)**, 2921-2930.

Wilby, R.L., and T.M.L. Wigley, 2002: Future changes in the distribution of daily precipitation totals across North Ameri-

ca. *Geophysical Research Letters*, **29(7)**, 1135, doi:10.1029/2001GL013048.

Wilkinson, C.R. (ed.), 2000: *Global Coral Reef Monitoring Network: Status of Coral Reefs of the World in 2000*. Australian Institute of Marine Science, Townsville, Queensland, 363 pp.

Willett, K.M., N.P. Gillett, P.D. Jones, and P.W. Thorne, 2007: Attribution of observed surface humidity changes to human influence. *Nature*, **449(7163)**, 710-712. doi:10.1038/nature06207

Williams, G., K.L. Layman, H.G. Stefan, 2004: Dependence of lake ice covers on climatic, geographic and bathymetric variables. *Cold Regions Science and Technology,* **40(3),** 145-164.

WMO (World Meteorological Organization), 2006: Atmospheric Research and Environment Programme. *Statement on Tropical Cyclones and Climate Change,* 13 pp., http://www.wmo.int/pages/prog/arep/tmrp/documents/iwtc_summary.pdf and *Summary Statement on Tropical Cyclones and Climate Change*, 1 p., http://www.wmo.int/pages/prog/arep/tmrp/documents/iwtc_statement.pdf

Wu, L. and B. Wang, 2004: Assessing impacts of global warming on tropical cyclone tracks. *Journal of Climate*, **17(8)**, 1686-1698.

Wu, P.L., R. Wood, and P. Stott, 2005: Human influence on increasing Arctic river discharges. *Geophysical Research Letters,* **32,** L02703, doi:10.1029/2005GL021570.

Yin, J.H., 2005: A consistent poleward shift of the storm tracks in simulations of 21st century climate. *Geophysical Research Letters,* **32,** L18701, doi:10.1029/2005GL023684.

Yonetani, T. and H.B. Gordon, 2001: Simulated changes in the frequency of extremes and regional features of seasonal/annual temperature and precipitation when atmospheric CO_2 is doubled. *Journal of Climate,* **14(8)**, 1765-1779.

Yoshimura, J., M. Sugi and A. Noda, 2006: Influence of greenhouse warming on tropical cyclone frequency. *Journal of the Meteorological Society of Japan*, **84(3)**, 405-428.

Yu, B. and F.W. Zwiers, 2007: The impact of combined ENSO and PDO on the PNA climate: a 1,000-year climate modeling study. *Climate Dynamics,* **29(7-8)**, 837-851. doi:10.1107/s00382-007-0267-4

Yu, B., A. Shabbar, and F.W. Zwiers, 2007: The enhanced PNA-like climate response to Pacific interannual and decadal variability. *Journal of Climate*, **20(13)**, 5285-5300. doi:10.1175/2007JCLI1480.1

Zelle, H., G.J. Van Oldenborgh, G. Burgers, and H. Dijkstra, 2005: El Niño and greenhouse warming: Results from ensemble simulations with the NCAR CCSM. *Journal of Climate,* **18(22)**, 4669-4683.

Zhang, R. and T.L. Delworth, 2006: Impact of Atlantic multidecadal oscillations on India/Sahel rainfall and Atlantic hurricanes. *Geophysical Research Letters*, **33,** L17712, doi:10.1029/2006GL026267.

Zhang, X.D. and J.E. Walsh, 2006: Toward a seasonally ice-covered Arctic Ocean: scenarios from the IPCC AR4 model simulations. *Journal of Climate,* **19(9)**, 1730-1747.

Zhang, X., F.W. Zwiers, and P.A. Stott, 2006: Multi-model multi-signal climate change detection at regional scale. *Journal of Climate,* **19(17)**, 4294-4307.

Zhang, X., F.W. Zwiers, G.C. Hegerl, N. Gillett, H. Lambert, and S. Solomon, 2007: Detection of human influence on twentieth-century precipitation trends. *Nature*, **448(7152)**, 461-465.

Zipser, E.J., 1977: Mesoscale and convective-scale downdrafts as distinct components of squall-line structure. *Monthly Weather Review*, **105(12)**, 1568-1589.

Zwiers, F.W. and X. Zhang, 2003: Toward regional scale climate change detection. *Journal of Climate,* **16(5)**, 793-797.

CHAPTER 4 REFERENCES

AGU (American Geophysical Union), 2006: *Hurricanes and the U.S. Gulf Coast: Science and Sustainable Rebuilding*. American Geophysical Union, Washington DC, 29 pp. Available at http://www.agu.org/report/hurricanes/

Cassano, J.J., P. Uotila, and A. Lynch, 2006: Changes in synoptic weather patterns in the polar regions in the 20th and 21st centuries, Part 1: Arctic. *International Journal of Climate*, **26(8)**, 1027-1049.

Cook, E., C.A. Woodhouse, C.M. Eakin, D.M. Meko, and D.W. Stahle, 2004: Long-term aridity changes in the western United States. *Science*, **306(5698)**, 1015-1018.

Elsner, J.B., K-B. Liu, and B. Kocher, 2000: Spatial variations in major U.S. hurricane activity: statistics and a physical mechanism. *Journal of Climate*, **13(13)**, 2293-2305.

HiFi, 2006: *A Program for Hurricane Intensity Forecast Improvements and Impacts Projections (HiFi): Science Strategy*. Available at http://www.nova.edu/ocean/hifi/hifi_science_strategy.pdf

Lynch, A., P. Uotila, and J.J. Cassano, 2006: Changes in synoptic weather patterns in the polar regions in the 20th and 21st centuries, Part 2: Antarctic. *International Journal of Climate*, **26(9)**, 1181-1199.

Mann, M.E., R.S. Bradley, and M.K. Hughes, 1999: Northern Hemisphere temperatures during the past millennium: inferences, uncertainties, and limitations. *Geophysical Research Letters,* **26(6)**, 759-762.

Meehl, G.A. and A. Hu, 2006: Megadroughts in the Indian monsoon region and southwest North America and a mechanism for associated multi-decadal Pacific sea surface temperature anomalies. *Journal of Climate,* **19(9)**, 1605-1623.

Meehl, G.A. and C. Tebaldi, 2004: More intense, more frequent, and longer lasting heat waves in the 21st century. *Science,* **305(5686)**, 994-997.

Meehl, G.A., C. Tebaldi, and D. Nychka, 2004: Changes in frost days in simulations of twenty-first century climate. *Climate Dynamics*, **23(5)**, 495-511.

NOAA SAB (Science Advisory Board), 2006: *Hurricane Intensity Research Working Group Final Report*. [62 pp.] Available at http://www.sab.noaa.gov/Reports/HIRWG_final73.pdf

NRC (National Research Council) of the National Academies, Board of Atmospheric Science and Climate, 2006: *Completing the Forecast: Characterizing and Communicating Uncertainty for Better Decisions Using Weather and Climate Forecasts.* Recommendation 3.4, National Academies Press, Washington DC, pp. 49.

NSB (National Science Board), 2006: *Hurricane Warning: The Critical Need for a National Hurricane Research Initiative.* NSB-06-115, National Science Foundation, Arlington, VA, 36 pp. Available at http://www.nsf.gov/nsb/committees/hurricane/initiative.pdf

Oouchi, K., J. Yoshimura, H. Yoshimura, R. Mizuta, S. Kusunoki, and A. Noda, 2006: Tropical cyclone climatology in a global-warming climate as simulated in a 20km-mesh global atmospheric model: frequency and wind intensity analyses. *Journal of the Meteorological Society of Japan*, **84(2),** 259-276.

Pulwarty, R.S., D.A. Wilhite, D.M. Diodato, and D.I. Nelson, 2007: Drought in changing environments: creating a roadmap, vehicles and drivers. *Natural Hazard Observer,* **31(5)**, 10-12.

Randall, D., 2005: Counting the clouds. *Journal of Physics: Conference Series*, **16**, 339-342. doi:10.1088/1742-6596/16/1/046 Available at http://www.iop.org/EJ/toc/1742-6596/16/1

Stott, P.A., D.A. Stone, and M.R. Allen, 2004: Human contribution to the European heatwave of 2003. *Nature,* **432(7017)**, 610-614.

Thompson, D.W.J. and J.M. Wallace, 2001: Regional climate impacts of the Northern Hemisphere annular mode and associated climate trends. *Science,* **293(5527)**, 85-89.

Wehner, M., L. Oliker, and J. Shalf, 2008: Towards ultra-high resolution models of climate and weather. *International Journal of High Performance Computing Applications,* (in press).

Woodhouse, C. and J. Overpeck, 1998: 2000 years of drought variability in the central United States. *Bulletin of the American Meteorological Society,* **79(12)**, 2693-2714.

APPENDIX A REFERENCES

Brockwell, P.J. and R.A. Davis, 2002: *Introduction to Time Series and Forecasting*. Springer, New York, 2nd ed., 434 pp.

R Development Core Team, 2007: R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Available at http://www.R-project.org

Vecchi, G.A. and T.R. Knutson, 2008: On estimates of historical North Atlantic tropical cyclone activity. Journal of Climate, Early online release doi:10.1175/2008JCLI2178.1.

Wigley, T.M.L., 2006: Appendix A: Statistical issues regarding trends. In: *Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences* [Karl, T.R., S.J. Hassol, C.D. Miller, and W.L. Murray (eds.)]. Climate Change Science Program, Washington DC, pp. 129-139.

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Contact Information

Global Change Research Information Office
c/o Climate Change Science Program Office
1717 Pennsylvania Avenue, NW
Suite 250
Washington, DC 20006
202-223-6262 (voice)
202-223-3065 (fax)

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U.S. Climate Change Science Program
1717 Pennsylvania Avenue, NW • Suite 250 • Washington, DC 20006 USA
1-202-223-6262 (voice) • 1-202-223-3065 (fax)
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