

Atlantic Oceanographic and Meteorological Laboratory

FY-2004 Publications

October 1, 2003 - September 30, 2004

(Names of AOML authors appear in CAPITAL letters)

Peer-Reviewed Publications

- [1] Bell, G.D., S.B. GOLDENBERG, C.W. LANDSEA, E. Blake, R. Pasch, M. Chelliah, and K. Mo. Atlantic hurricane season. In *State of the Climate in 2003*, D.H. Levinson and A.M. Waple (eds). Bulletin of the American Meteorological Society, 85(6):S20-S24 (2004).
- [2] BLACK, R.A., G.M. Heymsfield, and J. Hallett. Extra large particle images at 12 km in a hurricane eyewall: Evidence of high-altitude supercooled water? *Geophysical Research Letters*, 30(21):2124, doi:10.1029/2003GL017864 (2003).
- [3] BURPEE, R.W. Characteristics of African easterly waves. In *A Half Century of Progress in Meteorology: A Tribute to Richard Reed*, R.H. Johnson and R.A. Houze, Jr. (eds.). American Meteorological Society, Meteorological Monograph, Volume 31, Number 53 (ISBN 1-878220-58-6), 91-108 (2003).
- [4] Chave, A.D., D.S. Luther, and C.S. MEINEN. Correction of motional electrical field measurements for galvanic distortion. *Journal of Atmospheric and Oceanic Technology*, 21(2):317-330 (2004).
- [5] Chen, S.-C., S. Gulati, S. Hamid, X. Huang, L. Luo, N. MORISSEAU-LEROY, M.D. POWELL, C. Zhan, and C. Zhang. A web-based distributed system for hurricane occurrence projection. *Software: Practice and Experience*, 34(6):549-571 (2004).
- [6] Chung, S.-N., K. Lee, R.A. Feely, C.L. Sabine, F.J. Millero, R.H. WANNINKHOF, J.L. Bullister, R.M. Key, and T.-H. PENG. Calcium carbonate budget in the Atlantic Ocean based on water column inorganic carbon chemistry. *Global Biogeochemical Cycles*, 17(4):1093, doi:10.1029/2002GB002001 (2003).
- [7] Coale, K.H., K.S. Johnson, F.P. Chavez, K.O. Buesseler, R.T. Barber, M.A. Brzezinski, W.P. Cochlan, F.J. Millero, P.G. Falkowski, J.E. Bauer, R.H. WANNINKHOF, R.M. Kudela, M.A. Altabet, B.E. Hales, T. Takahashi, M.R. Landry, R.R. Bidigare, X. Wang, Z. Chase, P.G. Strutton, G.E. Friederich, M.Y. Gorbunov, V.P. Lance, A.K. Hiltling, M.R. Hiscock, M. Demarest, W.T. Hiscock, K.F. SULLIVAN, S.J. Tanner, R.M. Gordon, C.N. Hunter, V.A. Elrod, S.E. Fitzwater, J.L. Jones, S. Tozzi, M. Koblizek, A.E. Roberts, J. Herndon, J. Brewster, N. Ladizinsky, G. Smith, D. Cooper, D. Timothy, S.L. Brown, K.E. Selph, C.C. Sheridan, B.S. Twining, and Z.I. Johnson. Southern Ocean Iron Enrichment Experiment: Carbon cycling in high and low Si waters. *Science*, 304(5669):408-414 (2004).
- [8] DeGrandpre, M.D., R.H. WANNINKHOF, W.R. McGillis, and P.G. Strutton. A Lagrangian study of surface pCO₂ dynamics in the eastern equatorial Pacific Ocean. *Journal of Geophysical Research*, 109(C8):C08S07, doi:10.1029/2003JC002089 (2004).
- [9] Dugdale, R.C., M. Lyle, F.P. Wilkerson, F. Chai, R.T. Barber, and T.-H. PENG. Influence of equatorial diatom processes on Si deposition and atmospheric CO₂ cycles at glacial/interglacial time scales. *Paleoceanography*, 19(3):PA3011, doi:10.1029/2003PA000929 (2004).
- [10] DUNION, J.P., and C.S. Velden. The impact of the Saharan air layer on Atlantic tropical cyclone activity. *Bulletin of the American Meteorological Society*, 85(3):353-365 (2004).

- [11] Feely, R.A., R.H. WANNINKHOF, W.R. McGillis, M.-E. Carr, and C.E. Cosca. Effects of wind speed and gas exchange parameterizations on the air-sea CO₂ fluxes in the equatorial Pacific Ocean. *Journal of Geophysical Research*, 109(C8):C08S03, doi:10.1029/2003JC001896 (2004).
- [12] Franca, C., I. Wainer, A.R. de Mesquita, and G.J. GONI. Planetary equatorial trapped waves in the Atlantic Ocean from TOPEX/Poseidon altimetry. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 213-232 (2003).
- [13] Garraffo, Z.D., W.E. Johns, E.P. Chassignet, and G.J. GONI. North Brazil Current rings and transport of southern waters in a high resolution numerical simulation of the North Atlantic. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 375-409 (2003).
- [14] GARZOLI, S.L., A. Ffield, and Q. YAO. North Brazil Current rings and the variability in the latitude of the retroflection. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 357-373 (2003).
- [15] GARZOLI, S.L., A. Ffield, W.E. Johns, and Q. YAO. North Brazil Current retroflection and transports. *Journal of Geophysical Research*, 109(C1):1013, doi:10.1029/2003JC001775 (2004).
- [16] GONI, G.J., and W.E. Johns. Synoptic study of warm rings in the North Brazil Current retroflection region using satellite altimetry. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 335-356 (2003).
- [17] GONI, G.J., and J.A. TRINANES. Ocean thermal structure monitoring could aid in the intensity forecast of tropical cyclones. *EOS, Transactions, American Geophysical Union*, 84(51):573-578 (2003).
- [18] Guo, L., J.-Z. ZHANG, and C. Gueguen. Speciation and fluxes of nutrients (N, P, Si) from the upper Yukon River. *Global Biogeochemical Cycles*, 18(1):GB1038, doi:10.1029/2003GB002152 (2004).
- [19] Halliwell, G.R., R.H. Weisberg, and D.A. MAYER. A synthetic float analysis of upper-limb meridional overturning circulation interior ocean pathways in the tropical/subtropical Atlantic. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 93-136 (2003).
- [20] Hansell, D.A., H.W. Ducklow, A.M. Macdonald, and M.O. BARINGER. Metabolic poise in the North Atlantic Ocean diagnosed from organic matter transports. *Limnology and Oceanography*, 49(4):1084-1094 (2004).
- [21] Harasti, P.R., C.J. McAdie, P.P. DODGE, W.-C. Lee, J. Tuttle, S.T. MURILLO, and F.D. MARKS. Real-time implementation of single-Doppler radar analysis methods for tropical cyclones: Algorithm improvements and use with WSR-88D display data. *Weather and Forecasting*, 19(2):219-239 (2004).
- [22] Hare, J.E., C.W. Fairall, W.R. McGillis, J.B. Edson, B. Ward, and R.H. WANNINKHOF. Evaluation of the National Oceanic and Atmospheric Administration/Coupled-Ocean Atmospheric Response Experiment (NOAA/COARE) air-sea gas transfer parameterization using GasEx data. *Journal of Geophysical Research*, 109(C8):C08S11, doi:10.1029/2003JC001831 (2004).
- [23] Hu, C., F.E. Muller-Karger, G.A. Vargo, M.B. Neely, and E. JOHNS. Linkages between coastal runoff and the Florida Keys ecosystem: A study of a dark plume event. *Geophysical Research Letters*, 31(15):L15307, doi:10.1029/2004GL020382 (2004).
- [24] Jiang, M.-S., F. Chai, R.C. Dugdale, F.P. Wilkerson, T.-H. PENG, and R.T. Barber. A nitrate and silicate budget in the equatorial Pacific Ocean: A coupled physical-biological model study. *Deep-Sea Research, Part II*, 50(22-26):2971-2996 (2003).

- [25] Johns, W.E., R.J. Zantopp, and G.J. GONI. Cross-gyre transport by North Brazil Current rings. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 411-441 (2003).
- [26] KAPLAN, J., and M. DeMaria. Large-scale characteristics of rapidly intensifying tropical cyclones in the North Atlantic basin. *Weather and Forecasting*, 18(6):1093-1108 (2003).
- [27] KATSAROS, K.B., and A.V. Soloviev. Vanishing sea surface temperature gradients at low wind speeds. *Boundary-Layer Meteorology*, 112(2):381-396 (2004).
- [28] KATSAROS, K.B., A.M. MESTAS-NUNEZ, A. Bentamy, and E.B. FORDE. Wind bursts and enhanced evaporation in the tropical and subtropical Atlantic Ocean. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 463-474 (2003).
- [29] LANDSEA, C.W., C. Anderson, N. CHARLES, G. Clark, J.P. DUNION, J. Fernandez-Partagas, P. Hungerford, C. Neumann, and M. Zimmer. The Atlantic hurricane database re-analysis project: Documentation for the 1851-1910 alterations and additions to the HURDAT database. In *Hurricanes and Typhoons: Past, Present, and Future*, R.J. Murnane and K.-B. Liu (eds.). Columbia University Press (ISBN 0-231-12388-4), 177-221 (2004).
- [30] Lawrence, D., M.J. Dagg, H. Liu., S.R. CUMMINGS, P.B. ORTNER, and C.R. KELBLE. Wind events and benthic-pelagic coupling in a shallow subtropical bay in Florida. *Marine Ecology Progress Series*, 266:1-13 (2004).
- [31] Lee, K., S.-D. Choi, G.-H. Park, R.H. WANNINKHOF, T.-H. PENG, R.M. Key, C.L. Sabine, R.A. Feely, J.L. Bullister, F.J. Millero, and A. Kozyr. An updated anthropogenic CO₂ inventory in the Atlantic Ocean. *Global Biogeochemical Cycles*, 17(4):1116, doi:10.1029/2003GB002067 (2003).
- [32] Lonfat, M., F.D. MARKS, and S.S. Chen. Precipitation distribution in tropical cyclones using the Tropical Rainfall Measuring Mission (TRMM) microwave imager: A global perspective. *Monthly Weather Review*, 132(7):1645-1660 (2004).
- [33] Macdonald, A.M., M.O. BARINGER, R. WANNINKHOF, K. Lee, and D.W.R. Wallace. A 1998-1992 comparison of inorganic carbon and its transport across 24.5°N in the Atlantic. *Deep-Sea Research, Part II*, 50(22-26):3041-3064 (2003).
- [34] MANZELLO, D., and D. Lirman. The photosynthetic resilience of *Porites furcata* to salinity disturbance. *Coral Reefs*, 22(4):537-540 (2003).
- [35] MAYER, D.A., M.O. BARINGER, and G.J. GONI. Comparison of hydrographic and altimeter based estimates of sea level height variability in the Atlantic Ocean. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 23-48 (2003).
- [36] McFarquhar, G.M., and R.A. BLACK. Observations of particle size and phase in tropical cyclones: Implications for mesoscale modeling of microphysical processes. *Journal of the Atmospheric Sciences*, 61(4):422-439 (2004).
- [37] McGillis, W.R., W.E. Asher, R.H. WANNINKHOF, A.T. Jessup, and R.A. Feely. Introduction to special section: Air-sea exchange. *Journal of Geophysical Research*, 109(C8):C08S01, doi:10.1029/2004JC002605 (2004).

- [38] McGillis, W.R., J.B. Edson, C.J. Zappa, J.D. Ware, S.P. McKenna, E.A. Terray, J.E. Hare, C.W. Fairall, W. Drennan, M. Donelan, M.D. DeGrandpre, R.H. WANNINKHOF, and R.A. Feely. Air-sea CO₂ exchange in the equatorial Pacific. *Journal of Geophysical Research*, 109(C8):C08S02, doi:10.1029/2003JC002256 (2004).
- [39] MOLINARI, R.L. Annual and decadal variability in the western subtropical North Atlantic: Signal characteristics and sampling methodologies. *Progress in Oceanography*, 62(1):33-66 (2004).
- [40] MOLINARI, R.L., S. BAUER, D.P. SNOWDEN, G.C. Johnson, B. Bourles, Y. Gouriou, and H. Mercier. A comparison of kinematic evidence for tropical cells in the Atlantic and Pacific Oceans. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 269-286 (2003).
- [41] Olsen, A., J.A. TRINANES, and R. WANNINKHOF. Sea-air flux of CO₂ in the Caribbean Sea estimated using in situ and remote sensing data. *Remote Sensing of Environment*, 89(3):309-325 (2004).
- [42] PALMER, D.R. On the interpretation of measurements of acoustic backscatter from dredged-material plumes. *Journal of Marine Environmental Engineering*, 7(2):125-152 (2003).
- [43] Pandya, R.E., D.R. Smith, M.K. Ramamurthy, P.J. Croft, M.J. Hayes, K.A. Murphy, J.D. McDonnell, R.M. Johnson, and H.A. FRIEDMAN. 11th American Meteorological Society Education Symposium. *Bulletin of the American Meteorological Society*, 85(3):425-430 (2004).
- [44] PENG, T.-H., R. WANNINKHOF, and R.A. Feely. Increase of anthropogenic CO₂ in the Pacific Ocean over the last two decades. *Deep-Sea Research, Part II*, 50(22-26):3065-3082 (2003).
- [45] POWELL, M.D., D. Bowman, D. Gilhousen, S.T. MURILLO, N. CARRASCO, and R. ST. FLEUR. Tropical cyclone winds at landfall: The ASOS-C-MAN Wind Exposure Documentation Project. *Bulletin of the American Meteorological Society*, 85(6):845-851 (2004).
- [46] PRONI, J.R., and R.I. McMillen. Distinguishing ambient sediments at sensitive coastal oceans. In *Coastal Engineering VI: Computer Modelling and Experimental Measurements of Seas and Coastal Regions*, C.A. Brebbia, D. Almorza, and F. Lopez-Aguayo (eds.). WIT Press, 10 pp. (2003).
- [47] Sabine, C.L., R.A. Feely, N. Gruber, R.M. Key, K. Lee, J.L. Bullister, R.H. WANNINKHOF, C.S. Wong, D.W.R. Wallace, B. Tilbrook, F.J. Millero, T.-H. PENG, A. Kozyr, T. Ono, and A.F. Rios. The oceanic sink for anthropogenic CO₂. *Science*, 305(5682):367-371 (2004).
- [48] Saltzman, E.S., M. Aydin, W.J. De Bruyn, D.B. King, and S.A. YVON-LEWIS. Methyl bromide in pre-industrial air: Measurements from an Antarctic ice core. *Journal of Geophysical Research*, 109(D5):D05301, doi:10.1029/2003JD004157 (2004).
- [49] SCHMID, C., Z.D. Garraffo, E. JOHNS, and S.L. GARZOLI. Pathways and variability at intermediate depths in the tropical Atlantic. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 233-268 (2003).
- [50] SNOWDEN, D.P., and R.L. MOLINARI. Subtropical cells in the Atlantic Ocean: An observational summary. In *Interhemispheric Water Exchange in the Atlantic Ocean*, G.J. Goni and P. Malanotte-Rizzoli (eds.). Elsevier Oceanography Series, 68 (ISBN 0444512675), 287-312 (2003).
- [51] Strong, A.E., G. Liu, J. Meyer, J.C. HENDEE, and D. Sasko. Coral Reef Watch 2002. *Bulletin of Marine Science*, 75(2):259-268 (2004).
- [52] THACKER, W.C., S.-K. LEE, and G.R. Halliwell. Assimilating 20 years of Atlantic XBT data into HYCOM: A first look. *Ocean Modelling*, 7(1-2):183-210 (2004).

- [53] WANG, C., and J. Picaut. Understanding ENSO physics: A review. In *Earth's Climate: The Ocean-Atmosphere Interaction*, C. Wang, S.-P. Xie, and J. Carton (eds.). American Geophysical Union, Geophysical Monograph Series, Volume 147 (ISBN 0-87590-412-2), 21-48 (2004).
- [54] WANG, C., S.-P. Xie, and J.A. Carton. A Global survey of ocean-atmosphere interaction and climate variability. In *Earth's Climate: The Ocean-Atmosphere Interaction*, C. Wang, S.-P. Xie, and J.A. Carton (eds.). American Geophysical Union, Geophysical Monograph Series, Volume 147 (ISBN 0-87590-412-2), 1-19 (2004).
- [55] WANNINKHOF, R.H., K.F. SULLIVAN, and Z. Top. Air-sea gas transfer in the Southern Ocean. *Journal of Geophysical Research*, 109(C8):C08S19, doi:10.1029/2003JC001767 (2004).
- [56] WARD, B., R.H. WANNINKHOF, P.J. Minnett, and M.J. Head. SkinDeEP: A profiling instrument for upper-decameter sea surface measurements. *Journal of Atmospheric and Oceanic Technology*, 21(2):207-222 (2004).
- [57] Ward, B., R.H. WANNINKHOF, W.R. McGillis, A.T. Jessup, M.D. DeGrandpre, J.E. Hare, and J.B. Edson. Biases in the air-sea flux of CO₂ resulting from ocean surface temperature gradients. *Journal of Geophysical Research*, 109(C8):C08S08, doi:10.1029/2003JC001800 (2004).
- [58] WILLOUGHBY, H.E. A century of progress in tracking and warning: Improvements in observations, models, and forecasts. In *Hurricane! Coping with Disaster: Progress and Challenges since Galveston, 1900*, R.H. Simpson, R.A. Anthes, M. Garstang, and J. Simpson (eds.). American Geophysical Union, Special Publication Series 55 (ISBN 0-87590-297-9), 205-216 (2003).
- [59] YVON-LEWIS, S.A., D.B. King, R. Tokarczyk, K.D. GOODWIN, E.S. Saltzman, and J.H. Butler. Methyl bromide and methyl chloride in the Southern Ocean. *Journal of Geophysical Research*, 109(C2):C02008, doi:10.1029/2003JC001809 (2004).

Technical Reports

- [1] BARINGER, M.O., E. JOHNS, C.S. MEINEN, S.L. GARZOLI, and A. Flosadottir. Western boundary time series in the Atlantic Ocean, pp. 77-89. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004)
- [2] COOK, S.K., and R.L. MOLINARI. ENSO observing system, pp. 90-93. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).
- [3] Feely, R.A., and R.H. WANNINKHOF. Document ocean carbon sources and sinks, pp. 118-120. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).
- [4] Feely, R.A., and R.H. WANNINKHOF. Global repeat hydrographic/CO₂/tracer surveys in support of CLIVAR and global carbon cycle objectives, pp. 121-129. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).
- [5] GARZOLI, S.L., G.J. GONI, M.O. BARINGER, and R.L. MOLINARI. Implementation of high density XBT lines in the Atlantic Ocean, pp. 135-143. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).

- [6] GARZOLI, S.L., R. LUMPKIN, M. PAZOS, and C. ENGLER. Tropical and subtropical Atlantic layer studies, pp. 130-134. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).
- [7] HENDEE, J.C. The Coral Reef Early Warning System (CREWS): Marine environmental monitoring to support research and marine sanctuary management, pp. 23-25. In *The Effects of Combined Sea Temperature, Light, and Carbon Dioxide on Coral Bleaching, Settlement, and Growth*, J.C. Hendee (ed.). NOAA Research Special Report, Silver Spring, MD, 126 pp. (2004).
- [8] MANZELLO, D. A decade of SEAKEYS data: SST trends and patterns, pp. 35-36. In *The Effects of Combined Sea Temperature, Light, and Carbon Dioxide on Coral Bleaching, Settlement, and Growth*, J.C. Hendee (ed.). NOAA Research Special Report, Silver Spring, MD, 126 pp. (2004).
- [9] ORTNER, P.B., S.R. CUMMINGS, S.L. Smith, P. Lane, J. Lamkin, C. Yeung, and D. Jones. Abundance and diel migrations of demersal mesozooplankton and small reef fishes and their trophodynamic contribution to the coral reef ecosystem: A pilot study, p. 27-28. In *The Effects of Combined Sea Temperature, Light, and Carbon Dioxide on Coral Bleaching, Settlement, and Growth*, J.C. Hendee (ed.). NOAA Research Special Report, Silver Spring, MD, 126 pp. (2004).
- [10] WANNINKHOF, R.H., and R.A. Feely. Observing the global oceanic carbon cycle, pp. 12-28. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate*, D.M. Stanitski (ed.). NOAA Office of Climate Observation, Silver Spring, MD, 307 pp. (2004).

Conference Papers/Bulletins/Newsletters

- [1] ABERSON, S.D. The G-IV surveillance era, targeting, and ensemble forecasts (1997-present). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 236-237 (2004).
- [2] ABERSON, S.D., M.L. BLACK, M.T. Montgomery, and M. Bell. A record wind measurement in Hurricane Isabel: Direct evidence of an eyewall mesocyclone? *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 168-169 (2004).
- [3] Bell, M.M., M.T. Montgomery, M.L. BLACK, and S.D. ABERSON. Observed vortex and thermodynamic structure of Hurricane Isabel at maximum intensity. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 196-197 (2004).
- [4] BLACK, M.L., F.D. MARKS, R.F. ROGERS, L.K. Shay, B.A. Albrecht, and H.E. Willoughby. The mean structure of vertical velocities and radar reflectivities in the hurricane eyewall as they relate to environmental wind shear. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 94-95 (2004).
- [5] BLACK, M.L., J.P. DUNION, J.P. Kossin, W.H. Schubert, C.S. Velden, P.G. BLACK, R. Zehr, and S.D. ABERSON. Mesovortices in Hurricane Isabel (2003): A comparison of satellite, radar, and photographic observations. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 128-129 (2004).
- [6] BLACK, P.G. An overview of CBLAST flights into Hurricanes Fabian and Isabel (2003). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 1-2 (2004).
- [7] BLACK, P.G., E.W. UHLHORN, J.F. GAMACHE, W.D. Ramstrom, K. Emanuel, D. Esteban-Fernandez, J. Carswell, and P.S. Chang. Eyewall boundary layer structure in Hurricanes Fabian and Isabel. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 352-353 (2004).

- [8] DODGE, P.P., J.F. GAMACHE, E.W. UHLHORN, D. Esteban-Fernandez, J. Carswell, and P.S. Chang. Onshore and offshore wind flow regimes at the landfall of Hurricane Isabel (2003). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 564-565 (2004).
- [9] DUNION, J.P., C.S. Velden, J.D. Hawkins, and J.R. Parrish. The Saharan air layer: Insights from the 2002 and 2003 Atlantic hurricane seasons. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 495-496 (2004).
- [10] EASTIN, M.D., P.D. Reasor, J.F. GAMACHE, F.D. MARKS, and M.L. BLACK. Observed evolution of eyewall convection and low-wavenumber flow in Hurricane Guillermo (1997). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 445-446 (2004).
- [11] Esteban-Fernandez, D., S. Frasier, J. Carswell, P.S. Chang, P.G. BLACK, and F.D. MARKS. Three-dimensional atmospheric boundary layer wind fields from Hurricanes Fabian and Isabel. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 3-4 (2004).
- [12] FEUER, S.E., C.W. LANDSEA, L. Woolcock, and J.O. BERKELEY. The reanalysis of Atlantic basin tropical cyclones from the 1920s: A reexamination of three catastrophic hurricanes that impacted Florida. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 669-670 (2004).
- [13] FORDE, E.B. Severe weather. *Science Scope*, 27(7):33-35 (2004).
- [14] FORDE, E.B. Severe weather. *The Science Teacher*, 71(4):42-44 (2004).
- [15] Fox-Norse, V., and J.R. PRONI. Innovative applications of advanced ocean acoustics, optics, and other supporting technologies for marine water quality monitoring and assessment: New national guidance tools to address ongoing and emerging coastal management issues. *Proceedings, 13th Biennial Coastal Zone Conference*, Baltimore, MD, July 13-17, 2003. NOAA Coastal Services Center, CD-ROM, 20322-CD (2003).
- [16] French, J.R., and P.G. BLACK. Turbulent flux measurements within a hurricane boundary layer from an instrumented aircraft. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 9-10 (2004).
- [17] GAMACHE, J.F., J.S. GRIFFIN, P.P. DODGE, and N.F. GRIFFIN. Automatic Doppler analysis of three-dimensional wind fields in hurricane eyewalls. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 164-165 (2004).
- [18] GONI, G.J., M. DeMaria, J.A. TRINANES, and P.G. BLACK. Testing global estimates of the tropical cyclone heat potential fields to improve hurricane intensification prediction. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 7-8 (2004).
- [19] Hood, R.E., D. Cecil, F.J. LaFontaine, R. Blakeslee, D. Mach, G.M. Heymsfield, and F.D. MARKS. Classification of tropical oceanic precipitation using high altitude aircraft microwave and electric field measurements. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 172-173 (2004).
- [20] Houston, S.H., and P.P. DODGE. Comparison of GPS-sonde observations and surface data: An update. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 376 (2004).

- [21] Howard, J.R., A.L. Doggett, R.E. Peterson, P.G. BLACK, J.L. Schroeder, D.A. Smith, and J.P. Dunyak. Transition in onshore hurricane boundary layer winds during the landfall of Hurricane Lili (2002). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 526-527 (2004).
- [22] Huang, W.-P., C.-C. Wu, P.-H. Lin, S.D. ABERSON, and K.-C. Hsu. The preliminary analysis of the dropsonde data from DOTSTAR and their impact on the typhoon track forecasts. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 188-189 (2004).
- [23] Jacob, S.D., L.K. Shay, G.R. Halliwell, C.J. Koblinsky, and M.D. POWELL. Surface fluxes and upper ocean budgets during 2002 Hurricanes Isidore and Lili. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 617-618 (2004).
- [24] JONES, R.W., and H.E. Willoughby. Vortex alignment on the f and beta plane. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 625-626 (2004).
- [25] Jones, S.C., C.S. Velden, S.D. ABERSON, J. Abraham, and P.A. Harr. Extratropical transition and THORPEX. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 643-644 (2004).
- [26] KAPLAN, J., and M. DeMaria. Estimating the probability of rapid intensification of tropical cyclones in the Atlantic and eastern Pacific basins. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 538-539 (2004).
- [27] KATSAROS, K.B. Book review: *Atmosphere-Ocean Interactions, Volume 1*, W. Perrie (ed.). *Oceanography*, 16(4):106-108 (2003).
- [28] KATSAROS, K.B., and A.V. Soloviev. Reduced horizontal sea surface temperature gradients under conditions of clear sky and weak winds. *Preprints, 8th Symposium on Integrated Observing and Assimilation Systems for Atmosphere, Oceans, and Land Surface*, Seattle, WA, January 11-15, 2004. American Meteorological Society, Boston, 2 pp. (CD-ROM) (2004).
- [29] Kossin, J.P., W.H. Schubert, C.S. Velden, M.L. BLACK, P.G. BLACK, R.M. Zehr, S.D. ABERSON, and J.P. DUNION. Mesovortices in Hurricane Isabel (2003). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 447-448 (2004).
- [30] Majumdar, S.J., S.D. ABERSON, B.J. Etherton, L.D. Holland, Z. Toth, and C.H. Bishop. Targeting strategies to improve hurricane track forecasts. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 190-191 (2004).
- [31] McFarquhar, G.M., and R.A. BLACK. Hurricane observations of particle size and phase and their implications for mesoscale modeling of microphysical processes. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 348-349 (2004).
- [32] McFarquhar, G.M., H. Zhang, G.M. Heymsfield, J. Dudhia, J.B. Halverson, R.E. Hood, and F.D. MARKS. A modeling and observational study of the impacts of microphysical processes on the evolution of Hurricane Erin (2001). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 520-521 (2004).
- [33] McGillis, W.R., and R.H. WANNINKHOF. SOLAS (Surface Ocean Lower Atmosphere Study) holds first international summer school. *U.S. JGOFS Newsletter*, 12(3):14-15(2003).

- [34] McNoldy, B.D., M.D. EASTIN, C.M. Rozoff, and W.H. Schubert. Multiple eyewall structure of Hurricane Juliette (2001). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 126-127 (2004).
- [35] MURILLO, S.T., P.P. DODGE, W.-C. Lee, and G.M. Barnes. Implementing a single-Doppler radar technique for tropical cyclones and integrating radar-derived wind fields into H*Wind surface analyses. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 606-607 (2004).
- [36] POWELL, M.D., J.D. Kepert, A. Boissonade, and P.J. Vickery. Uncertainty in hurricane winds: What do new measurements and simulations tell us about Hurricane Andrew? *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 522-523 (2004).
- [37] ROGERS, R.F., M.L. BLACK, S.S. Chen, and R.A. BLACK. Evaluating microphysical parameterization schemes for use in hurricane environments. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 518-519 (2004).
- [38] ROGERS, R.F., F.D. MARKS, T.P. Marchok, and R. Tuleya. The development of a new validation technique for tropical cyclone rainfall. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 292-293 (2004).
- [39] Schneider, R., G.M. Barnes, and P.P. DODGE. Low-level kinematic, thermodynamic, and reflectivity fields of Hurricane Bonnie (1998) near landfall. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 572-573 (2004).
- [40] TRINANES, J.A., and G.J. GONI. A web application for near real time distribution of tropical cyclone heat potential estimates. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 5-6 (2004).
- [41] UHLHORN, E.W., and P.G. BLACK. Comparison of boundary layer profiles in Hurricanes Fabian and Isabel observed by GPS dropwindsonde and aircraft during CBLAST “stepped descents.” *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 391-392 (2004).
- [42] UHLHORN, E.W., and L.K. Shay. Analysis of upper-ocean thermodynamic observations forced by Hurricane Lili (2002). *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 619-620 (2004).
- [43] WANNINKHOF, R.H., and F.J. Millero. Sea keepers network to study sea’s role in absorbing greenhouse gases. *Showboats International* (January issue), 71 (2004).
- [44] WHITE, S.R., and L.K. Shay. Modulations of surface wave energy over near-inertial time scales. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 621-622 (2004).
- [45] Willoughby, H.E., and M.E. RAHN. The climatology of hurricane wind profiles. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 264-265 (2004).
- [46] Wu, C.-C., P.-H. Lin, T.-C. Yeh, and S.D. ABERSON. Dropsonde observations for typhoon surveillance near the Taiwan region (DOTSTAR): An overview. *Preprints, 26th Conference on Hurricanes and Tropical Meteorology*, Miami, FL, May 3-7, 2004. American Meteorological Society, Boston, 186-187 (2004).