

Atlantic Oceanographic and Meteorological Laboratory

FY-2006 Publications

October 1, 2005 - September 30, 2006

(Names of AOML authors appear in CAPITAL letters)

Peer-Reviewed Publications

- [1] ABERSON, S.D., and B.J. Etherton. Targeting and data assimilation studies during Hurricane Humberto (2001). *Journal of the Atmospheric Sciences*, 63(1):175-186 (2006).
- [2] ABERSON, S.D., and J.B. Halverson. Kelvin-Helmholtz billows in the eyewall of Hurricane Erin. *Monthly Weather Review*, 134(3):1036-1038 (2006).
- [3] ABERSON, S.D., J.P. DUNION, and F.D. MARKS. A photograph of a wavenumber-2 asymmetry in the eye of Hurricane Erin. *Journal of the Atmospheric Sciences*, 63(1):387-391 (2006).
- [4] ABERSON, S.D., M.L. BLACK, R.A. BLACK, R.W. BURPEE, J.J. CIONE, C.W. LANDSEA, and F.D. MARKS. Thirty years of tropical cyclone research with the NOAA P-3 aircraft. *Bulletin of the American Meteorological Society*, 87(8):1039-1055 (2006).
- [5] BARINGER, M.O., and C.S. MEINEN. Global oceans: Thermohaline circulation. In *State of the Climate in 2005*, K.A. Shein, A.M. Waple, H.J. Diamond, and J.M. Levy (eds.). *Bulletin of the American Meteorological Society*, 87(6):S27-S28 (2006).
- [6] Bell, G.D., E. Blake, K.C. Mo, C.W. LANDSEA, R. Pasch, M. Chelliah, and S.B. GOLDENBERG. Tropical cyclones: Atlantic basin. In *State of the Climate in 2005*, K.A. Shein, A.M. Waple, H.J. Diamond, and J.M. Levy (eds.). *Bulletin of the American Meteorological Society*, 87(6):S33-S37 (2006).
- [7] Bell, G.D., E. Blake, K.C. Mo, C.W. LANDSEA, R. Pasch, M. Chelliah, S.B. GOLDENBERG, and H.J. Diamond. The record breaking 2005 Atlantic hurricane season. In *State of the Climate in 2005*, K.A. Shein, A.M. Waple, H.J. Diamond, and J.M. Levy (eds.). *Bulletin of the American Meteorological Society*, 87(6):S44-S45 (2006).
- [8] Browder, J.A., R. Alleman, S. Markeley, P.B. ORTNER, and P.A. Pitts. Biscayne Bay conceptional ecological model. *Wetlands*, 25(4):854-869 (2005).
- [9] Chahine, M.T., T.S. Pagano, H.H. Aumann, R. ATLAS, C. Barnet, J. Blaisdell, L. Chen, M. Divakarla, E.J. Fetzer, M. Goldberg, C. Gautier, S. Granger, S. Hannon, F.W. Irion, R. Kakar, E. Kalnay, B.H. Lambrigtsen, S.-Y. Lee, J. LeMarshall, W.W. McMillan, L. McMillin, E.T. Olsen, H. Revercomb, P. Rosenkranz, W.L. Smith, D. Staelin, L.L. Strow, J. Susskind, D. Tobin, W. Wolf, and L. Zhou. AIRS: Improving weather forecasting and providing new data on greenhouse gases. *Bulletin of the American Meteorological Society*, 87(7):911-926 (2006).
- [10] Corbosiero, K.L., J. Molinari, and M.L. BLACK. The structure and evolution of Hurricane Elena (1985), Part 1: Symmetric intensification. *Monthly Weather Review*, 133(10):2905-2921 (2005).
- [11] DeMaria, M., J.A. Knaff, and J. KAPLAN. On the decay of tropical cyclone winds crossing narrow landmasses. *Journal of Applied Meteorology and Climatology*, 45(3):491-499 (2006).
- [12] ENFIELD, D.B., and L. Cid-Serrano. Projecting the risk of future climate shifts. *International Journal of Climatology*, 27(6):885-895 (2006).

- [13] ENFIELD, D.B., S.-K. LEE, and C. WANG. How are large western hemisphere warm pools formed? *Progress in Oceanography*, 70(2-4):346-365 (2006).
- [14] Esteban-Fernandez, D., J.R. Carswell, S. Frasier, P.S. Chang, P.G. BLACK, and F.D. MARKS. Dual-polarized C- and Ku-band ocean backscatter response to hurricane-force winds. *Journal of Geophysical Research*, 111(C8):C08013, doi:10.1029/2005JC003048 (2006).
- [15] Feely, R.A., L.D. Talley, G.C. Johnson, C.L. Sabine, and R. WANNINKHOF. Repeat hydrography cruises reveal chemical changes in the North Atlantic. *EOS, Transactions, American Geophysical Union*, 86(42):399, 404-405 (2005).
- [16] Feely, R.A., T. Takahashi, R. WANNINKHOF, M.J. McPhaden, C.E. Cosca, S.C. Sutherland, and M.-E. Carr. Decadal variability of the air-sea CO₂ fluxes in the equatorial Pacific Ocean. *Journal of Geophysical Research*, 111(C8):C08S90, doi:10.1029/2005JC003129 (2006).
- [17] Graber, H.C., V.J. Cardone, R.E. Jensen, D.N. Slinn, S.C. Hagen, A.T. Cox, M.D. POWELL, and C. Grassl. Coastal forecasts and storm surge predictions for tropical cyclones: A timely partnership program. *Oceanography*, 19(1):130-141 (2006).
- [18] Hausman, S.A., K.V. OOHAMA, and W.H. Schubert. Potential vorticity structure of simulated hurricanes. *Journal of the Atmospheric Sciences*, 63(1):87-108 (2006).
- [19] HENDEE, J.C., E.R. STABENAU, L. FLORIT, D. MANZELLO, and C. JEFFRIS. Infrastructure and capabilities of a near real-time meteorological and oceanographic in situ instrumented array and its role in marine environmental decision support. In *Remote Sensing of Aquatic Coastal Ecosystem Processes*, Volume 9, L.L. Richardson and E.F. LeDrew (eds.). Springer Verlag, 135-156 (2006).
- [20] Hitchcock, G.L., T.N. Lee, P.B. ORTNER, S.R. CUMMINGS, C.R. KELBLE, and E. Williams. Property fields in a Tortugas eddy in the southern Straits of Florida. *Deep-Sea Research, Part I*, 52(12):2195-2213 (2005).
- [21] Hood, R.E., R.J. Blakeslee, M. Goodman, D.J. Cecil, D.M. Mach, F.J. LaFontaine, G.M. Heymsfield, F.D. MARKS, and E.J. Zipser. Classification of tropical oceanic precipitation using high altitude aircraft microwave and electric field measurements. *Journal of the Atmospheric Sciences*, 63(1):218-233 (2006).
- [22] Jiang, H., P.G. BLACK, E.J. Zipser, F.D. MARKS, and E.W. UHLHORN. Validation of rain-rate estimation in hurricanes from the Stepped Frequency Microwave Radiometer: Algorithm correction and error analysis. *Journal of the Atmospheric Sciences*, 63(1):252-267 (2006).
- [23] Kakar, R., F.D. MARKS, G. McFarquhar, and R. Hood. Preface. *Journal of the Atmospheric Sciences*, 63(1):3-4 (2006).
- [24] Kim, D.-O., K. Lee, S.-D. Choi, H.-S. KANG, J.-Z. ZHANG, and Y.-S. Chang. Determination of diapycnal diffusion rates in the upper thermocline in the North Atlantic Ocean using sulfur hexafluoride. *Journal of Geophysical Research*, 110(C10):C10010, doi:10.1029/2004JC002835 (2005).
- [25] LAGIER, M., C.A. Scholin, J.W. Fell, J. Wang, and K.D. GOODWIN. An electrochemical RNA hybridization assay for detection of the fecal indicator bacterium *Escherichia coli*. *Marine Pollution Bulletin*, 50(11):1251-1261(2005).
- [26] LANDSEA, C.W. Hurricanes and global warming. *Nature*, 438(7071):E11-E12 (2005).
- [27] Lavin, M.F., P.C. Fiedler, J.A. Amador, L.T. Ballance, J. Farber-Lorda, and A.M. MESTAS-NUNEZ. A review of eastern tropical Pacific oceanography: Summary. *Progress in Oceanography*, 69(2-4):391-398 (2006).

- [28] Lee, T.N., E. JOHNS, N. MELO, R.H. SMITH, P.B. ORTNER, and N. Smith. On Florida Bay hypersalinity and water exchange. *Bulletin of Marine Science*, 79(2):301-327 (2006).
- [29] Legeais, J.-F., S. Speich, M. Arhan, I. Ansorge, E. Fahrbach, S.L. GARZOLI, and A. Klepikov. The baroclinic transport of the Antarctic Circumpolar Current south of Africa. *Geophysical Research Letters*, 32(24):L24602, doi:10.1029/2005GL023271 (2005).
- [30] Lentini, C., G.J. GONI, and D.B. Olson. Investigation of Brazil Current rings in the confluence region. *Journal of Geophysical Research*, 111(C6):C06013, doi:10.1029/2005JC002988 (2006).
- [31] Li, Y.-H., L. Menviel, and T.-H. PENG. Nitrate deficits by nitrification and denitrification processes in the Indian Ocean. *Deep-Sea Research, Part I*, 53(1):94-110 (2006).
- [32] Lindberg, W.J., T.K. Frazer, K.M. Portier, F. Vose, J. Loftin, D.J. Murie, D.M. MASON, B. Nagy, and M.K. Hart. Density-dependent habitat selection and performance by a large mobile reef fish. *Ecological Applications*, 16(2):731-746 (2006).
- [33] LUEGER, H., R. WANNINKHOF, D.W.R. Wallace, and A. Kortzinger. CO₂ fluxes in the subtropical and subarctic North Atlantic based on measurements from a volunteer observing ship. *Journal of Geophysical Research*, 111(6):C06024, doi:10.1029/2005JC003101 (2006).
- [34] LUMPKIN, R., and G.J. GONI. Global oceans: Surface current observations. In *State of the Climate in 2005*, K.A. Shein, A.M. Waple, H.J. Diamond, and J.M. Levy (eds.). *Bulletin of the American Meteorological Society*, 87(6):S25-S26 (2006).
- [35] Majumdar, S.J., S.D. ABERSON, C.H. Bishop, R. Buizza, M.S. Peng, and C.A. Reynolds. A comparison of adaptive observing guidance for Atlantic tropical cyclones. *Monthly Weather Review*, 134(9):2354-2372 (2006).
- [36] MANZELLO, D., J.C. HENDEE, D. Ward, and Z. Hillis-Starr. An evaluation of environmental parameters coincident with the partial bleaching event in St. Croix, U.S. Virgin Islands (2003). *Proceedings, 10th International Coral Reef Symposium*, Okinawa, Japan, June 28-July 2, 2004. Japanese Coral Reef Society, 709-717 (2006).
- [37] MASON, D.M., T.B. Johnson, C.J. Harvey, J.F. Kitchell, S.T. Schram, C.R. Bronte, M.H. Hoff, S.T. Lozano, A.S. Trebitz, D.R. Schreiner, E.C. Lamon, and T. Hrabik. Hydroacoustic estimates of abundance and spatial distribution of pelagic prey fishes in western Lake Superior. *Journal of Great Lakes Research*, 31(4):426-438 (2005).
- [38] McFarquhar, G.M., H. Zhang, G.M. Heymsfield, J.B. Halverson, R.E. Hood, J. Dudhia, and F.D. MARKS. Factors affecting the evolution of Hurricane Erin (2001) and the distributions of hydrometeors: Role of microphysical processes. *Journal of the Atmospheric Sciences*, 63(1):127-150 (2006).
- [39] McGillis, W.R., and R. WANNINKHOF. Aqueous CO₂ gradients for air-sea flux estimates. *Marine Chemistry*, 98(1):100-108 (2006).
- [40] MEINEN, C.S., M.O. BARINGER, and S.L. GARZOLI. Variability in Deep Western Boundary Current transports: Preliminary results from 26.5°N in the Atlantic. *Geophysical Research Letters*, 33(17):L17610, doi:10.1029/2006GL026965 (2006).
- [41] MESTAS-NUNEZ, A.M., and A.J. Miller. Interdecadal variability and climate change in the eastern tropical Pacific: A review. *Progress in Oceanography*, 69(2-4):267-284 (2006).
- [42] MESTAS-NUNEZ, A.M., A. Bentamy, and K.B. KATSAROS. Seasonal and El Niño variability in weekly satellite evaporation over the global ocean during 1996-1998. *Journal of Climate*, 19(10):2025-2035 (2006).

- [43] MESTAS-NUNEZ, A.M., C. Zhang, and D.B. ENFIELD. Uncertainties in estimating moisture fluxes over the Intra-Americas Sea. *Journal of Hydrometeorology*, 6(5):696-709 (2005).
- [44] Michaels, P.J., P.C. Knappenberger, and C. LANDSEA. Comments on “Impacts of CO₂-induced warming on simulated hurricane intensity and precipitation: Sensitivity to the choice of climate model and convective scheme.” *Journal of Climate*, 18(23):5179-5182 (2005).
- [45] Molinari, J., P.P. DODGE, D. Vollaro, K.L. Corbosiero, and F.D. MARKS. Mesoscale aspects of the downshear reformation of a tropical cyclone. *Journal of the Atmospheric Sciences*, 63(1):341-354 (2006).
- [46] Mooers, C.N.K., H.-S. KANG, I. Bang, and D.P. SNOWDEN. Some lessons learned from comparisons of numerical simulations and observations of the JES circulation. *Oceanography*, 19(3):86-95 (2006).
- [47] Park, G.-H., K. Lee, R. WANNINKHOF, and R.A. Feely. Empirical temperature-based estimates of variability in the oceanic uptake of CO₂ over the past two decades. *Journal of Geophysical Research*, 111(C7):C07S07, doi:10.1029/2005JC003090 (2006).
- [48] Pelegri, J.L., J.H. Churchill, A.D. Kirwan, S.-K. LEE, R.E. Munn, and N.R. Pettigrew. Gabriel T. Csanady: Understanding the physics of the ocean. *Progress in Oceanography*, 70(2-4):91-112 (2006).
- [49] Pielke, R.A., Jr., C.W. LANDSEA, M. Mayfield, J. Laver, and R. Pasch. Hurricanes and global warming. *Bulletin of the American Meteorological Society*, 86(11):1571-1575 (2005).
- [50] Pielke, R.A., Jr., C.W. LANDSEA, M. Mayfield, J. Laver, and R. Pasch. Reply to “Hurricanes and global warming potential linkages and consequences.” *Bulletin of the American Meteorological Society*, 87(5):628-631 (2006).
- [51] Plattner, S., D.M. MASON, G.A. Leshkevich, D.J. Schwab, and E.S. Rutherford. Classifying and forecasting coastal upwellings in Lake Michigan using satellite-derived temperature images and buoy data. *Journal of Great Lakes Research*, 32(1):63-76 (2006).
- [52] Riishojgaard, L.P., R. ATLAS, and G.D. Emmitt. Reply to “The impact of Doppler lidar wind observations on a single-level meteorological analysis.” *Journal of Applied Meteorology and Climatology*, 45(6):887-888 (2006).
- [53] Rudnick, D.T., P.B. ORTNER, J.A. Browder, and S.M. Davis. A conceptual ecological model of Florida Bay. *Wetlands*, 25(4):870-883 (2005).
- [54] Sabine, C.L., R.A. Feely, and R. WANNINKHOF. Global oceans: Ocean carbon. In *State of the Climate in 2005*, K.A. Shein, A.M. Waple, H.J. Diamond, and J.M. Levy. *Bulletin of the American Meteorological Society*, 87(6):S29-S30 (2006).
- [55] SCHMID, C. Impact of combining temperature profiles from different instruments on an analysis of mixed layer properties. *Journal of Oceanic and Atmospheric Technology*, 22(10):1571-1587 (2005).
- [56] Shen, B.-W., R. ATLAS, J.-D. Chern, O. Reale, S.-J. Lin, T. Lee, and J. Chang. The 0.125 degree finite-volume general circulation model on the NASA Columbia supercomputer: Preliminary simulations of mesoscale vortices. *Geophysical Research Letters*, 33(5):L05801, doi:10.1029/2005GL024594 (2006).
- [57] Shen, B.-W., R. ATLAS, O. Reale, S.-J. Lin, J.-D. Chern, J. Chang, C. Henze, and J.-L. Li. Hurricane forecasts with a global mesoscale-resolving model: Preliminary results with Hurricane Katrina (2005). *Geophysical Research Letters*, 33(13):L13813, doi:10.1029/2006GL026143 (2006).
- [58] Shoosmith, D.R., M.O. BARINGER, and W.E. Johns. A continuous record of Florida Current temperature transport at 27°N. *Geophysical Research Letters*, 32(23):L23603, doi:10.1029/2005GL024075 (2005).

- [59] STABENAU, E.R., J.C. HENDEE, and L. FLORIT. Techniques for the automated assessment of intense light and high sea temperature on coral response. *Proceedings, 10th International Coral Reef Symposium*, Okinawa, Japan, June 28-July 2, 2004. Japanese Coral Reef Society, 702-708 (2006).
- [60] Sun, W., M. Cetin, W.C. THACKER, T.M. Chin, and A.S. Willsky. Variational approaches on discontinuity localization and field estimation in sea surface temperature and soil moisture. *IEEE Transactions on Geoscience and Remote Sensing*, 44(2):336-350 (2006).
- [61] Takahashi, T., S.C. Sutherland, R.A. Feely, and R. WANNINKHOF. Decadal change of the surface water pCO₂ in the North Pacific: A synthesis of 35 years of observations. *Journal of Geophysical Research*, 111(C7):C07S05, doi:10.1029/2005JC003074 (2006).
- [62] WANG, C. An overlooked feature of tropical climate: Inter-Pacific Atlantic variability. *Geophysical Research Letters*, 33(12):L12702, doi:10.1029/2006GL026324 (2006).
- [63] WANG, C., and P.C. Fiedler. ENSO variability in the eastern tropical Pacific: A review. *Progress in Oceanography*, 69(2-4):239-266 (2006).
- [64] Wang, W., and C. WANG. Formation and decay of the spring warm pool in the South China Sea. *Geophysical Research Letters*, 33(2):L02615, doi:10.1029/2005GL025097 (2006).
- [65] WANG, C., D.B. ENFIELD, S.-K. LEE, and C.W. LANDSEA. Influences of the Atlantic warm pool on western hemisphere summer rainfall and Atlantic hurricanes. *Journal of Climate*, 19(12):3011-3028 (2006).
- [66] WANG, C., W. Wang, D. Wang, and Q. Wang. Interannual variability of the South China Sea associated with El Niño. *Journal of Geophysical Research*, 111(C3):C03023, doi:10.1029/2005JC003333 (2006).
- [67] WANNINKHOF, R., K.F. SULLIVAN, W.P. DAMMANN, J.R. PRONI, F. Bloetscher, A.V. Soloviev, and T.P. CARSEY. Farfield tracing of a point source discharge plume in the coastal ocean using sulfur hexafluoride. *Environmental Science and Technology*, 39(22):8883-8890 (2005).
- [68] Willoughby, H.E., R.W. Darling, and M.E. RAHN. Parametric representation of the primary hurricane vortex, Part II: A new family of sectionally continuous profiles. *Monthly Weather Review*, 134(4):1102-1120 (2006).
- [69] ZHANG, J.-Z. Enhanced sensitivity in flow injection analysis using a long pathlength liquid waveguide capillary flow cell for spectrophotometric detection. *Analytical Sciences*, 22(1):57-60 (2006).
- [70] ZHANG, J.-Z., and C.J. FISCHER. A simplified resorcinol method for direct spectrophotometric determination of nitrate in seawater. *Marine Chemistry*, 99(1-4):220-226 (2006).

Technical Reports

- [1] BARINGER, M.O., G.J. GONI, and S.L. GARZOLI. Atlantic high density XBT lines, pp. 181-182. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [2] BARINGER, M.O., C.S. MEINEN, and S.L. GARZOLI. The meridional overturning circulation and oceanic heat transport, pp. 68-73. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).

- [3] BARINGER, M.O., C.S. MEINEN, and S.L. GARZOLI. Western boundary time series in the Atlantic Ocean, pp. 150-158. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [4] BARINGER, M.O., S.L. GARZOLI, G.J. GONI, W.C. THACKER, and R. LUMPKIN. Quarterly reports on the state of the ocean: Meridional heat transport variability in the Atlantic Ocean, pp. 265-267. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [5] Brandt, S., J.C. HENDEE, P. Levin, J. Phinney, D. Scheurer, and F. Schwing. White Paper #5: Ecological forecasting, pp. 52-63. In *Ecosystem Science Capabilities Required to Support NOAA's Mission in the Year 2020*, S.A. Murawski and G.C. Matlock (eds.). NOAA Technical Memorandum, NMFS-F/SPO-74, 97 pp. (2006).
- [6] CARSEY, T.P., R. Ferry, K.D. GOODWIN, P.B. ORTNER, J.R. PRONI, P. Swart, and J.-Z. ZHANG. Brevard County nearshore ocean nutrification analysis. NOAA Technical Report, OAR AOML-37 (PB2006-101563), 84 pp. (2005).
- [7] Carter, G., P. Restrepo, J. Hameedi, P.B. ORTNER, C. Sellinger, J. Stein, and T. Beechie. White Paper #3: Freshwater issues, pp. 29-39. In *Ecosystem Science Capabilities Required to Support NOAA's Mission in the Year 2020*, S.A. Murawski and G.C. Matlock (eds.). NOAA Technical Memorandum, NMFS-F/SPO-74, 97 pp. (2006).
- [8] DeMaster, D., M. Fogarty, D.M. MASON, G. Matlock, and A. Hollowed. White Paper #2: Management of living marine resources in an ecosystem context, pp. 15-28. In *Ecosystem Science Capabilities Required to Support NOAA's Mission in the Year 2020*, S.A. Murawski and G.C. Matlock (eds.). NOAA Technical Memorandum, NMFS-F/SPO-74, 97 pp. (2006).
- [9] Feely, R.A., R. WANNINKHOF, C.L. Sabine, G.C. Johnson, M.O. BARINGER, J. Bullister, C.W. Mordy, and J.-Z. ZHANG. Global repeat hydrographic/CO₂/tracer surveys in support of CLIVAR and global carbon cycle objectives: Carbon inventories and fluxes, pp. 196-205. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [10] GARZOLI, S.L., R.L. MOLINARI, and R. LUMPKIN. Surface drifter program, pp. 124-127. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [11] Johnson, G.C., S. Levitus, J.M. Lyman, C. SCHMID, and J.K. Willis. Ocean heat content variability, pp. 74-84. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [12] Kourafalou, V.H., R.S. Balotro, G. Peng, T.N. Lee, E. JOHNS, P.B. ORTNER, A. Wallcraft, and T. Townsend. Seasonal variability of circulation and salinity around Florida Bay and the Florida Keys: SoFLA-HYCOM results and comparison to in-situ data. University of Miami Technical Report, RSMAS 2006-04, 102 pp. (2006).
- [13] LUMPKIN, R., and G.J. GONI. Evaluating the ocean observing system: Performance measurement for heat storage, pp. 263-264. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).

- [14] LUMPKIN, R., and G.J. GONI. Surface currents, pp. 61-67. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [15] Majumdar, S.J., S.D. ABERSON, C.H. Bishop, R. Buizza, M.S. Peng, and C.A. Reynolds. A comparison of adaptive observing guidance for Atlantic tropical cyclones. European Centre for Medium-Range Weather Forecasts, Technical Memorandum No. 482, 24 pp. (2005).
- [16] MOLINARI, R.L. NOAA's XBT network, pp. 179-180. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [17] MOLINARI, R.L., R. LUMPKIN, C. SCHMID, and M. McPhaden. NOAA's PIRATA northeast extension, pp. 136-137. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [18] Roemmich, D.H., R.E. Davis, S.C. Riser, W.B. Owens, R.L. MOLINARI, S.L. GARZOLI, and G.C. Johnson. The ARGO Project: Global ocean observations for understanding and prediction of climate variability, pp. 187-191. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [19] Russell, J.L., C. Sweeney, A. Gnanadesikan, R.A. Feely, and R. WANNINKHOF. Optimal network design to detect spatial patterns and variability of ocean carbon sources and sinks from underway surface pCO₂ measurements, pp. 229-231. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [20] Sabine, C.L., R.A. Feely, and R. WANNINKHOF. The global ocean carbon cycle: Inventories, sources, and sinks, pp. 97-104. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [21] SCHMID, C., and G.J. GONI. Evaluating the ocean observing system: Performance measurement for heat storage, pp. 261-262. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [22] Takahashi, T., F. Millero, R. Key, D. Chipman, E. PELTOLA, S. Rubin, C. Sweeney, and S. Sutherland. Determination of carbon dioxide, hydrographic, and chemical parameters during the R/V *Nathaniel B. Palmer* cruise in the southern Indian Ocean (WOCE section SO4I, 3 May-4 July 1996). Oak Ridge National Laboratory/Carbon Dioxide Information Analysis Center, ORNL/CDIAC-150, NDP-086, 50 pp. (2006).
- [23] WANNINKHOF, R., R.A. Feely, N.R. Bates, F.J. Millero, T. Takahashi, and S. COOK. Document ocean carbon sources and sinks: Surface water pCO₂ measurements from ships, pp. 207-215. In *Annual Report on the State of the Ocean and the Ocean Observing System for Climate (FY-2005)*, J.M. Levy, D.M. Stanitski, and P. Arkin (eds.). NOAA Office of Climate Observation, Silver Spring, MD, 337 pp. (2006).
- [24] WANNINKHOF, R., S.C. Doney, E. PELTOLA, R.D. CASTLE, F.J. Millero, J.L. Bullister, D.A. Hansell, M.J. Warner, C. Langdon, G.C. Johnson, and C.W. Mordy. Carbon dioxide, hydrographic, and chemical data obtained during the R/V *Ronald H. Brown* Repeat Hydrography Cruise in the Atlantic Ocean: CLIVAR CO₂ section A16S_2005 (11 January-24 February 2005), A. Kozyr (ed.). Oak Ridge National Laboratory/Carbon Dioxide Information Analysis Center, Oak Ridge, TN, ORNL/CDIAC-151, NDP-087, 38 pp. (2005).

Conference Papers/Bulletins/Newsletters

- [1] ABERSON, S.D., and D.P. Stern. Extreme horizontal winds measured by dropwindsondes in hurricanes. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [2] ATLAS, R., O. Reale, B.-W. Shen, and S.-J. Lin. The use of remotely sensed data and innovative modeling to improve hurricane prediction. In *Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XII*, S.S. Shen and P.E. Lewis (eds.). *Proceedings, SPIE*, 6233:62330U, doi:10.1117/12.673221 (8 pp.) (2006).
- [3] ATLAS, R., O. Reale, J. Ardizzone, J. Terry, J.-C. Jusem, E. Brin, D. Bungato, and P. Woiceshyn. Geophysical validation of WINDSAT surface wind data and its impact on numerical weather prediction. In *Atmospheric and Environmental Remote Sensing Data Processing and Utilization II: Perspective on Calibration/Validation Initiatives and Strategies*, A.H. Huang and H.J. Bloom (eds.). *Proceedings, SPIE*, 6301:63010C, doi:10.1117/12.680923 (7 pp.) (2006).
- [4] BLACK, P.G., E.A. D'Asaro, J.R. French, and W.M. Drennan. Synthesis of major results from the Coupled Boundary Layer Air-Sea Transfer Experiment (CBLAST) in hurricanes (2003-2004). *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 8 pp. (CD-ROM) (2006).
- [5] Chou, K.-H., C.-C. Wu, P.-H. Lin, S.D. ABERSON, M. Peng, and T. Nakazawa. The impact of dropsonde data from DOTSTAR on tropical cyclone track forecasting. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 12 pp. (CD-ROM) (2006).
- [6] Contreras, R.F., D. Esteban Fernandez, P.S. Chang, and P.G. BLACK. High resolution airborne radar measurements of Hurricane Isabel. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [7] DUNION, J.P., J.D. Hawkins, and C.S. Velden. Hunting for Saharan air with the NOAA G-IV jet. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [8] Eastin, M.D., P.D. Reasor, D.S. Nolan, F.D. MARKS, and J.F. GAMACHE. Evolution of low-wavenumber vorticity during rapid intensification: A dual-Doppler analysis. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 6 pp. (CD-ROM) (2006).
- [9] Etherton, B.J., C.-C. Wu, S.J. Majumdar, and S.D. ABERSON. A comparison of targeting techniques for 2005 Atlantic tropical cyclones. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [10] French, J.R., W.M. Drennan, J. Zhang, and P.G. BLACK. Direct airborne measurements of momentum flux in hurricanes. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 6 pp. (CD-ROM) (2006).
- [11] Halliwell, G.R., L.K. Shay, E.W. UHLHORN, S.D. Jacob, and O.M. Smedstad. Improving ocean state initialization in coupled tropical cyclone forecast models. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).

- [12] Hood, R.E., E. Zipser, G.M. Heymsfield, R. Kakar, J. Halverson, R.F. ROGERS, and M.L. BLACK. Overview of the field phase of the NASA Tropical Cloud Systems and Processes (TCSP) Experiment. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 3 pp. (CD-ROM) (2006).
- [13] Jaimes, B., L.K. Shay, E.W. UHLHORN, T.M. Cook, J. Brewster, G.R. Halliwell, and P.G. BLACK. Influence of Loop Current ocean heat content on Hurricanes Katrina, Rita, and Wilma. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [14] JOHNS, E., R.H. SMITH, P.B. ORTNER, T.N. Lee, C.R. KELBLE, and N. MELO. Real-time oceanographic and meteorological observations in the Florida Keys National Marine Sanctuary. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 133-134 (2005).
- [15] JOHNS, E., R.H. SMITH, P.B. ORTNER, T.N. Lee, C.R. KELBLE, and N. MELO. Salinity variability in south Florida coastal waters, 1995-2005. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 135-136 (2005).
- [16] KAPLAN, J., and M. DeMaria. Estimating the likelihood of rapid intensification in the Atlantic and east Pacific basins using SHIPS model data. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [17] Katsaros, K.B., R.T. Pinker, A. Bentamy, J.A. Carton, W.M. Drennan, and A.M. MESTAS-NUNEZ. Net air-sea flux estimates for the tropical and subtropical Atlantic Ocean based on satellite data. *Proceedings, 3rd MSG RAO Workshop*, Helsinki, Finland, June 12-16, 2006. European Space Agency, ESA SP-619, 77-82 (2006).
- [18] KELBLE, C.R., E.M. JOHNS, P.B. ORTNER, W.K. Nuttle, T.N. Lee, C.D. Hittle, and R.H. SMITH. Salinity patterns of Florida Bay. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 137-138 (2005).
- [19] Lee, T.N., E.M. JOHNS, N. MELO, R.H. SMITH, P.B. ORTNER, D. Smith, and N. Smith. On Florida Bay hypersalinity and water exchange. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 123-124 (2005).
- [20] Liu, Q., M. Surgi, S. Lord, W.-S. Wu, D. Parrish, S. Gopalakrishnan, J. Waldrop, and J.F. GAMACHE. Hurricane initialization in HWRF model. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 2 pp. (CD-ROM) (2006).
- [21] Lonfat, M., R.F. ROGERS, F.D. MARKS, T. Marchok, and A. Boissonnade. The effect of shear and topography on rainfall forecasting with R-CLIPER. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 2 pp. (CD-ROM) (2006).
- [22] Marchok, T., R.F. ROGERS, and R. Tuleya. New methods for evaluating rainfall forecasts from operational models for landfalling tropical cyclones. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 5 pp. (CD-ROM) (2006).
- [23] MELO, N., T.N. Lee, E. JOHNS, R.H. SMITH, P.B. ORTNER, and D. Smith. Recent measurements of salinity, flow, and sea level variability in western basins of Florida Bay—Rabbit and Twin Key Basins. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 141-142 (2005).

- [24] Reynolds, C.A., M.S. Peng, S.J. Majumdar, S.D. ABERSON, C.H. Bishop, and R. Buizza. Interpretation of tropical cyclone targeting guidance. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 10 pp. (CD-ROM) (2006).
- [25] ROGERS, R.F., M.L. BLACK, F.D. MARKS, K.M. VALDE, and S.S. Chen. A comparison of tropical cyclone hydrometeor profiles from TRMM, airborne radar, and high-resolution simulations. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 3 pp. (CD-ROM) (2006).
- [26] ROGERS, R.F., M.L. BLACK, R. Hood, J. Halverson, E. Zipser, and G. Heymsfield. The Intensity Forecasting Experiment (IFEX): A NOAA multi-year field program for improving tropical cyclone intensity forecasting. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 5 pp. (CD-ROM) (2006).
- [27] ROGERS, R.F., M.L. BLACK, P.T. WILLIS, R.A. BLACK, A. Heymsfield, A. Bansemer, and G. Heymsfield. An evaluation of the microphysics fields of Hurricane Dennis (2005) at different stages of its lifecycle. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [28] Shay, L.K., and E.W. UHLHORN. Loop Current interactions during Hurricanes Isidore and Lili. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 4 pp. (CD-ROM) (2006).
- [29] SMITH, R.H., E. JOHNS, P.B. ORTNER, T.N. Lee, C.R. KELBLE, and N. MELO. Satellite-tracked surface drifter trajectories reveal the spatial and temporal current variability of south Florida. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 148-149 (2005).
- [30] SMITH, R.H., E.M. JOHNS, S.R. CUMMINGS, P.B. ORTNER, C.R. KELBLE, N. MELO, and T.N. Lee. The influence of the 2005 hurricane season on water quality in Florida Bay and surrounding coastal waters. *Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference*, Duck Key, FL, December 11-14, 2005. University of Florida, 146-147 (2005).
- [31] Stern, D., and S.D. ABERSON. Extreme vertical winds measured by dropsondes in hurricanes. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 5 pp. (CD-ROM) (2006).
- [32] UHLHORN, E.W., and L.K. Shay. Mechanical energy and vorticity balances within the ocean mixed layer under tropical cyclones. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 3 pp. (CD-ROM) (2006).
- [33] Walsh, K.J.E., M. Fiorina, C.W. LANDSEA, and K. McInnes. Objective detection of tropical cyclones in climate models. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 2 pp. (CD-ROM) (2006).
- [34] Yablonsky, R.M., I.Ginis, E.W. UHLHORN, and A. Falkovich. Using AXBTs to improve the performance of coupled hurricane-ocean models. *Preprints, 27th Conference on Hurricanes and Tropical Meteorology*, Monterey, CA, April 24-28, 2006. American Meteorological Society, Boston, 7 pp. (CD-ROM) (2006).