

PIRATA Bibliography

Last update: 19 May 2011

Peer-reviewed

2011

- Brandt, P., G. Caniaux, B. Bourlès, A. Lazar, M. Dengler, A. Funk, V. Hormann, H. Giordani and F. Marin, 2011: Equatorial upper-ocean dynamics and their interaction with the West African Monsoon. *Atmospheric Science Letters*, **12**, 24-30, doi: 10.1002/asl.287.
- Brandt, P., A. Funk, V. Hormann, M. Dengler, R. Greatbatch and J. Toole, 2011: Interannual atmospheric variability forced by the deep equatorial Atlantic Ocean. *Nature*, 18 May 2011, doi:10.1038/nature1013.
- Caniaux, G., H. Giordani, J.L. Redelsperger, F. Guichard, E. Key, and M. Wade, 2011: Coupling between the Atlantic Cold Tongue and the West African Monsoon in boreal Spring and Summer. *J. Geophys. Res.*, **116**, C04003, doi:10.1029/2010JC006570.
- Foltz, G. R., M. J. McPhaden and R. Lumpkin, 2011: A strong Atlantic Meridional Mode event in 2009: the role of mixed layer dynamics. *J. Climate*, in revision.
- Nalli, N. R., E. Joseph, V. Morris, C. Barnett, W. Wolf, D. Wolfe, P. J. Minnett, M. Szczodrak, M. Izaguirre, R. Lumpkin, H. Xie, A. Smirnov and J. Wei, 2011: Multi-year observations of the tropical Atlantic atmosphere: Multidisciplinary applications of the NOAA Aerosols and Ocean Science Expeditions (AEROSE). *Bulletin of the American Meteorological Society*, in press.

2010

- Brandt, P., V. Hormann, A. Körtzinger, M. Visbeck, G. Krahnemann, L. Stramma, R. Lumpkin and C. Schmid, 2010: Changes in the ventilation of the oxygen minimum zone of the tropical North Atlantic. *J. Phys. Oceanogr.*, **40** (8), 1784–1801.
- Foltz, G., and M. J. McPhaden, 2010: Abrupt equatorial wave-induced cooling of the Atlantic cold tongue in 2009. *Geophys. Res. Lett.*, **37** (24), doi:10.1029/2010gl045522.
- Foltz, G. R., and M. J. McPhaden, 2010: Interaction between the Atlantic meridional and Nino modes. *Geophys. Res. Lett.*, L18604, doi:10.1029/2010GL044001.
- McPhaden, M.J., K. Ando, B. Bourles, H. P. Freitag, R. Lumpkin, Y. Masumoto, V. S. N. Murty, P. Nobre, M. Ravichandran, J. Vialard, D. Vousden, W. Yu, 2009: The global tropical moored buoy array. OceanObs09 Community White Paper, Venice, Italy.

2009

- Athie, G., F. Marin, A-M. Treguier, B. Bourlès and C. Guiavarc'h, 2009: Sensitivity of near surface Tropical Instability Waves to sub-monthly wind forcing in the tropical Atlantic. *Ocean Modelling*, **30**, 241-255.
- Bourras, D., A. Weill, G. Caniaux, L. Eymard, B. Bourlès, S. Letourneur, D. Legain, E. Key, F. Baudin, B. Piguet, O. Traullé, G. Bouhours, B. Sinardet, J. Barié, J.P. Vinson, F. Boutet, and C Berthod: Turbulent air-sea fluxes in the Gulf of Guinea during the EGEE-AMMA experiment. *J. Geophys. Res.*, **114**, C04014, doi:10.1029/2008JC004951.
- Bunge, L., and A.J. Clarke, 2009: Seasonal Propagation of Sea Level along the Equator in the Atlantic. *J. Phys. Oceanogr.*, **39**, 1069–1074.
- Foltz, G.R., and M.J. McPhaden, 2009: Impact of barrier layer thickness on SST in the central tropical North Atlantic. *J. Climate*, **22**(2), 285-299.

- Galloudec, F. Messal, and L. Parent, 2009: The GODAE/Mercator-Ocean global ocean forecasting system: results, applications and prospects, *J. Operational Oceanography*, **1** (1), 51-57.
- Grodsky, S.A., A. Bentamy, J.A. Carton and R.T. Pinker, 2009: Intraseasonal Latent Heat Flux Based on Satellite Observations. *J. Climate*, **22**, 4539–4556.
- Hormann, V. and P. Brandt, 2009: Upper equatorial Atlantic variability during 2002 and 2005 associated with equatorial Kelvin waves. *J. Geophys. Res.*, **114**, C03007, doi:10.1029/2008JC005101.
- Kolodziejczyk, N., B. Boulès, F. Marin, J. Grelet and R. Chuchla, 2009: The seasonal variability of the Equatorial Undercurrent and the South Equatorial Undercurrent at 10°W as inferred from recent in situ observations, *J. Geophys. Res.*, **114**, C06014, doi:10.1029/2008JC004976.
- Lebel, T., D. J. Parker, C. Flamant, B. Boulès, B. Marticorena, E. Mougin, C. Peugeot, A. Diedhiou, J. M. Haywood, J. B. Ngamini, J. Polcher, J.-L. Redelsperger and C. D. Thorncroft, 2009: The AMMA field campaign: multiscale and multidisciplinary observations in the West African region. *Quart. J. Royal Met. Soc.*, DOI: 10.1002/qj.486.
- Marin, F., G. Caniaux, B. Boulès, H. Giordani, Y. Gouriou and E. Key, 2009: Why were sea surface temperature so different in the eastern equatorial Atlantic in June 2005 and 2006? *J. Phys. Oceanogr.*, **39**, 1416-1431, doi: 10.1175/2008JPO4030.1.
- Silva, M., M. Araujo, J. Servain, P. Penven and C. A. D. Lentini, 2009: High-resolution regional ocean dynamics simulation in the southwestern tropical Atlantic. *Ocean Modelling*, **30**, 256—269.
- Silva, M., M. Araujo, J. Servain and P. Penve, 2009: Circulation and Heat Budget in a Regional Climatological Simulation of the Southwestern Tropical Atlantic. *Tropical Oceanography, Recife*, **37** (1—2), 41—57.

2008

- Athie, G. and Marin, F., 2008: Cross-equatorial structure and temporal modulation of Intra-seasonal variability at the surface of the Tropical Atlantic Ocean. *J. Geophys. Res.*, **113**, C8, doi:10.1029/2007JC004332.
- Boulès, B., R. Lumpkin, M. J. McPhaden, F. Hernandez, P. Nobre, E. Campos, L. Yu, S. Planton, A. J. Busalacchi, A. D. Moura, J. Servain and J. Trotte, 2008: The PIRATA Program: History, Accomplishments, and Future Directions. *Bulletin of the American Meteorological Society*, **89** (8), doi: 10.1175/2008BAMS2462.1.
- Brandt, P., V. Hormann, B. Boulès, J. Fischer, F. A. Schott, L. Stramma and M. Dengler, 2008: Oxygen tongues and zonal currents in the equatorial Atlantic. *J. Geophys. Res.*, **113**, C04012, doi:10.1029/2007JC004435.
- Bunge L., C. Provost, L. Hua and A. Kartavstseff, 2008: Variability at intermediate depths at the equator in the Atlantic Ocean in 2000-2006: annual cycle, equatorial deep jets and intraseasonal meridional velocity fluctuations *J. Phys. Oceanogr.* doi:10.1175/2008JPO3781.1.
- Drévilion, M., R. Bourdallé-Badie, C. Derval, Y. Drillet, J.-M. Lellouche, E. Rémy, B. Tranchant, M. Benkiran, E. Greiner, S. Guinehut, N. Verbrugge, G. Garric, C.-E. Testut, M. Laborie, L. Nouel, P. Bahurel, C. Bricaud, L. Crosnier, E. Dombrowsky, E. Durand, N. Ferry, F. Hernandez, O. Le Galloudec, F. Messal, and L. Parent, 2008: The GODAE/Mercator-Ocean global ocean forecasting system: results, applications and prospects, *J. Op. Oceanogr.*, **1** (1), 51-57.
- Foltz, G.R. and M.J. McPhaden, 2008: Seasonal mixed layer salinity balance of the tropical North Atlantic Ocean. *J. Geophys. Res.*, **113**, C02013, doi:10.1029/2007JC004178.

- Foltz, G.R., and M.J. McPhaden, 2008: Impact of Saharan dust on tropical North Atlantic SST. *J. Climate*, **21**, 5048-5060.
- Han, W., P.J. Webster, J.L. Lin, W.T. Liu, R. Fu, D. Yuan, and A. Hu, 2008: Dynamics of Intraseasonal Sea Level and Thermocline Variability in the Equatorial Atlantic during 2002–03. *J. Phys. Oceanogr.*, **38**, 945–967.
- Lebel, T., D. J. Parker, C. Flament, B. Bourlès, B. Marticorena, E. Mougin, C. Peugeot, A. Diedhiou, J. M. Haywood, J. B. Ngamini, J. Polcher, J.-L. Redelsperger, and C. D. Thorncroft, 2008: The AMMA field campaigns: Multiscale and multidisciplinary observations in the West African region. *Quart. J. Royal Met. Soc.*, doi:10.1002/qj.486.
- Lefèvre, N., A. Guillot, L. Beaumont, and T. Ganguy, 2008: Variability of fCO₂ in the Eastern Tropical Atlantic from a moored buoy. *J. Geophys. Res.*, **113**, C01015, doi:10.1029/2007JC004146.
- Pimenta, F., W. Kempton and R. Garvine, 2008: Combining meteorological stations and satellite data to evaluate the offshore wind power resource of Southeastern Brazil. *Renewable Energy*, **33** (11), 2375—2387.
- Polo, I., A. Lazar, B. Rodriguez-Fonseca, and S. Arnault, 2008: Oceanic Kelvin Waves and Tropical Atlantic intraseasonal Variability. Part I: Kelvin wave characterization. *J. Geophys. Res.*, **113**, C07009, doi:10.1029/2007JC004495.
- Reverdin, G., F. Marin, B. Bourlès and P. L'Herminier, 2008: XBT temperature errors during French research cruises (1999-2007). *J. Atm. Oc. Tech.*, **26**(11), 2462–2473.
- Urbano, D. F., R. A. F. De Almeida, and P. Nobre, 2008: Equatorial Undercurrent and North Equatorial Countercurrent at 38°W: A new perspective from direct velocity data, *J. Geophys. Res.*, **113**, C04041, doi:10.1029/2007JC004215.
- von Schuckmann, K., P. Brandt, C. Eden, 2008: Generation of Tropical Instability Waves in the Atlantic Ocean, *J. Geophys. Res.*, **113**, C08034, doi:10.1029/2007JC004712.

2007

- Balmaseda, M.A., D. P. Dee, A. P. Vidard and D. L. T. Anderson, 2007: A multivariate treatment of bias for sequential data assimilation: Application to the Tropical Oceans. *Q. J. Roy. Meteor. Soc.*, **133**(622), 167-179.
- Clayson, C. A. and D. Weitlich, 2007: Variability of tropical diurnal sea surface temperature. *J. Climate*, **20**, 334-352.
- Etienne, H., and M. Benkiran, 2007: Multivariate assimilation in Mercator project: New statistical parameters from forecast error estimation. *J. Mar. Sys.*, **65**(1-4), 430-449.
- Vidard, A., D. L. T. Anderson, and M. Balmaseda, 2007: Impact of ocean observation systems on ocean analysis and seasonal forecasts. *Mon. Weather Rev.*, **135**(2), 409-429.
- Yu, L., R.A. Weller, 2007: Objectively Analyzed air-sea heat Fluxes (OAFlux) for the global ice-free oceans. *Bull. Amer. Meteor. Soc.*, **88**(4), 527-539.

2006

- Arhan, M., A. M. Tréguier, B. Bourlès, and S. Michel, 2006: Diagnosing the annual cycle of the equatorial undercurrent in the Atlantic ocean from a general circulation model. *J. Phys. Oceanogr.*, **36**, 1502-1522.
- Bunge L., C. Provost, J. Lilly, M. D'Orgeville, A. Kartavtseff and J.L. Melice, 2006: Structure of the horizontal velocity in the first 1600 m of the water column at the equator in the Atlantic at 10 W, *J. Phys. Oceanogr.*, **36**, 1287-1304.
- Brandt, P., F. A. Schott, C. Provost, A. Kartavtseff, V. Hormann, B. Bourlès, and J. Fischer, 2006: Circulation in the central equatorial Atlantic: Mean and intraseasonal to seasonal variability. *Geophys. Res. Lett.*, **33**(7), doi/10.1029/2005GL025498.

- Chang, P., T. Yamagata, P. Schopf, S.K. Behera, J. Carton, W.E. Kessler, G. Meyers, T. Qu, F. Schott, S. Shetye, and S.P. Xie, 2006: Climate fluctuations of Tropical Coupled Systems – The Role of Ocean Dynamics. *J. Climate (Special Section)*, **19**, 5122-5174.
- Foltz, G.R., and M.J. McPhaden, 2006: Unusually warm sea surface temperatures in the tropical North Atlantic during 2005. *Geophys. Res. Lett.*, **33**, L19703, doi:10.1029/2006GL027394.
- Okumura, Y. and S. P. Xie, 2006: Some Overlooked Features of Tropical Atlantic Climate Leading to a New Niño-Like Phenomenon. *J. Climate*, **19**, 5859–5874.
- Peter, A.C., M. Le Henaff, Y. du Penhoat, C.E. Menkes, F. Marin, J. Vialard, G. Caniaux, and A. Lazar, 2006: A model study of the seasonal mixed layer heat budget in the equatorial Atlantic. *J. Geophys. Res.*, **111**, C06014, doi:10.1029/2005JC003157.
- Siqueira, L. S. P. and P. Nobre, 2006: Tropical Atlantic Sea Surface Temperature and heat flux simulations in a coupled GCM. *Geophys. Res. Lett.*, **33**, L15708, doi:10.1029/2006GL026528.
- Stockdale, T.N, M.A. Balmaseda, and A.P. Vidard, 2006: Tropical Atlantic SST prediction with coupled ocean-atmosphere GCMs. *J. Climate*, **19**(23), 6047-6061.
- Yu, L., X. Jin, and R.A. Weller, 2006: Role of net surface heat flux in seasonal variations of sea surface temperature in the tropical Atlantic Ocean. *J. Climate*, **19**, 6153–6169.

2005

- Brut, A., A. Butet, P. Durand, G. Caniaux, and S. Planton, 2005: Estimations of turbulent air-sea fluxes and their parameterizations including airflow distortion corrections from the EQUALANT99 dataset, *Quart. J. Roy. Meteor. Soc.*, **131**, 2497–2538.
- Clauzet G., I. Wainer, et J. Servain, 2005: Times-scales of variability from the high frequency PIRATA data revealed by wavelet analysis. *Braz. J. Meteorol.*, **20**(1), 43-58.
- Delcroix, T., M.J. McPhaden, A. Dessier, and Y. Gouriou, 2005: Time and space scales for sea surface salinity in the tropical oceans. *Deep-Sea Res.*, **52**, 787-813.
- Durand B., Servain J., Laurent H., and Machado L. A., 2005: Tropical Atlantic moisture flux, Convection over Northeastern Brazil, and pertinence of the PIRATA network, *J. Climate.*, **18**(12), 2093-2101.
- Enfield, D. and S. Lee, 2005: The heat balance of the western hemisphere warm pool. *J. Climate.*, **18**, 2662-2681.
- Foltz, G.R., and M.J. McPhaden, 2005: Mixed layer heat balance on intraseasonal time scales in the northwestern tropical Atlantic Ocean. *J. Climate*, **18**, 4168-4184.
- Giarolla, E., P. Nobre, M. Malagutti, and P. Pezzi, The Atlantic Equatorial Undercurrent: PIRATA observations and simulations with GFDL Modular Ocean Model at CPTEC, 2005: *Geophys. Res. Lett.*, **32**, L10617, doi:10.1029/2004GL022206.
- Grodsky, S., J. Carton, C. Provost, J. Servain, J. Lorenzetti, and M.J. McPhaden, 2005: Tropical instability waves at 0N, 23W in the Atlantic: A case study using Pilot Research Moored Array in the Tropical Atlantic (PIRATA) mooring data. *J. Geophys. Res.*, **110**, C08010, doi:10.1029/2005JC00294.
- Lumpkin R, and Z. Garraffo, 2005: Evaluating the Decomposition of Tropical Atlantic Drifter Observations. *J. Atmos. and Oceanic Technol.* **22**(9), 1403-1415.

2004

- Dourado, M., and G. Caniaux, 2004: One-dimensional modelling of the oceanic boundary layer using PIRATA data at 10S, 10W. *Revista Brasileira de Meteorologia*, **19**(2), 217-226.
- Foltz, G.R., S.A. Grodsky, J.A. Carton, and M.J. McPhaden, 2004: Seasonal salt budget of the northwestern tropical Atlantic Ocean along 38°W. *J. Geophys. Res.*, **109**, C03052, doi:10.1029/2003JC002111.

- Foltz G. R., M. J. McPhaden, 2004: The 30-70 day oscillations in the tropical Atlantic, *Geophys. Res. Lett.*, **31**, L15205, doi:10.1029/2004GL020023.
- Gentemann, C.L., F.J. Wentz, C.A. Mears, and D.K. Smith, 2004: In situ validation of Tropical Rainfall Measuring Mission microwave sea surface temperatures. *J. Geophys. Res.*, **109**, C04021, doi:10.1029/2003JC002092.
- Jochum, M., Malanotte-Rizzoli, P., and Busalacchi, A. J, 2004: Tropical instability waves in the Atlantic Ocean. *Ocean Modelling*, **7**, 145–163.
- Provost, C., S. Arnault, N. Chouaib, A. Kartavtseff, L. Bunge, and E. Sultan, 2004: Topex-Poseidon and JASON equatorial sea surface slope anomaly in the Atlantic in 2002: comparison with wind and current measurements at 23°W. *Mar. Geodesy*, **27**, 31-45.
- Serra, Y.L., and M.J. McPhaden, 2004: In Situ Observations of Diurnal Variability in Rainfall over the Tropical Pacific and Atlantic Oceans. *J. Climate*, **17**(18), 3496–3509.
- Vauclair, F., du Penhoat, Y., Reverdin, G., 2004: Heat and Mass Budgets of the Warm Upper Layer of the Tropical Atlantic Ocean in 1979–99. *J. Phys. Oceanogr.*, **34**(4), 903–919.
- Yu, L. S., R. A. Weller, and B. M. Sun, 2004: Mean and variability of the WHOI daily latent and sensible heat fluxes at in situ flux measurement sites in the Atlantic Ocean. *J. Climate.*, **17**(11), 2096-2118.
- Yu, L. S., R. A. Weller, and B. M. Sun, 2004: Improving Latent and Sensible Heat Flux Estimates for the Atlantic Ocean (1988–99) by a Synthesis Approach. *J. Climate.*, **17**(2), 373–393.

2003

- Foltz, G.R., S.A. Grodsky, J.A. Carton, and M.J. McPhaden, 2003: Seasonal mixed layer heat budget of the tropical Atlantic Ocean. *J. Geophys. Res.*, **108**(C5), doi:10.1029/2002JC001584.
- Garzoli, S. L. and J. Servain, 2003: CLIVAR workshop on tropical Atlantic variability, *Geophys. Res. Lett.*, **30**(5), 8001, doi:10.1029/2002GL016823.
- Molinari, R. L., S. Bauer, D. Snowden, G. C. Johnson, B. Bourlès, Y. Gouriou, and H. Mercier, 2003: A comparison of kinematic evidence for tropical cells in the Atlantic and Pacific oceans. In *Interhemispheric Water Exchange in the Atlantic Ocean*, eds. G. J. Goni and P. Manalotte-Rizzoli, Elsevier Oceanography Series, **68**, 269-286.
- Schott, F. A., M. Dengler, P. Brandt, K. Affler, J. Fischer, B. Bourlès, Y. Gouriou, R.L. Molinari, and M. Rhein, 2003: The zonal currents and transports at 35°W in the tropical Atlantic. *Geophys. Res. Lett.* **30**(7), 1349, doi:10.1029/2002GL016849.
- Serra, Y. L., and M. J. McPhaden, 2003: Multiple time- and space-scale comparisons of ATLAS buoy rain gauge measurements with TRMM satellite precipitation measurements. *J. Applied Meteor.*, **42**(8), 1045-1059.
- Servain, J., G. Clauzet, and I. C. Wainer, 2003: Modes of tropical Atlantic climate variability observed by PIRATA, *Geophys. Res. Lett.*, **30**(5), 8003, doi:10.1029/2002GL01512.
- Sun, B., L. Yu, and R. A. Weller, 2003: Comparisons of surface meteorology and turbulent heat fluxes over the Atlantic: NWP model analyses versus moored buoy observations. *J. Climate*, **16**, 679-695.
- Vianna, M. L., and V. V. de Menezes, 2003: A seasonal and interannual study of the western equatorial Atlantic upper thermocline circulation variability. In *Interhemispheric Water Exchange in the Atlantic Ocean*, eds. G. J. Goni and P. Manalotte-Rizzoli, Elsevier Oceanography Series, **68**, 137-173.
- Wainer, I., G. Clauzet, J. Servain and J. Soares, 2003: Time scales of upper ocean temperature variability inferred from the PIRATA data (1997-2000). *Geophys. Res. Lett.*, **30**(5), 8004, doi:10.1029/2002GL015147.

Weill, A., L. Eymard, G. Caniaux, D. Hauser, S. Planton, H. Dupuis, A. Brut, C. Guerin, P. Cacass, A. Butet, S. Choche, R. Pedreros, P. Durand, D. Bourras, H. Giordani, G. Lachaud and G. Bouhours, 2003: Toward a Better Determination of Turbulent Air–Sea Fluxes from Several Experiments. *J. Climate*, **16**(4), 600–618.

2002

- Bourlès, B., M. d'Orgeville, G. Eldin, Y. Gouriou, R. Chuchla, Y. DuPenhoat, and S. Arnault, 2002: On the evolution of the thermocline and subthermocline eastward currents in the Equatorial Atlantic. *Geophys. Res. Lett.*, **29**(16), doi:10.1029/2002GL015098.
- Ebuchi N., H.C. Graber, M.J. Caruso, 2002: Evaluation of wind vectors observed by QuikSCAT / SeaWinds using ocean buoy data. *J. Atmos. Ocean. Technol.*, **19**, 2049–2062.
- Troccoli, A., and Coauthors, 2002: Salinity Adjustments in the Presence of Temperature Data Assimilation. *Mon. Wea. Rev.*, **130**(1), 89–102.

2001

- Belyaev, K. P., C. A. S. Tanajura, and J. J. O'Brien, 2001: A data assimilation method used with an ocean circulation model and its application to the tropical Atlantic, *Applied Mathematical Modeling*, **25**(8), 655–670.
- Bentamy, A., K.B. Katsaros, W. Drennan, and E.B. Forde, 2001: Daily surface wind fields produced by merged satellite data. In Gas Transfer at Water Surfaces, E.S. Saltzman, M. Donelan, W. Drennan, and R. Wanninkhof (eds.). *AGU Geophysical Monograph Series*, Volume **127** (ISBN 0875909868), 343–349.
- Serra, Y.L., P. A'Hearn, H.P. Freitag, and M.J. McPhaden, 2001: ATLAS Self-Siphoning Rain Gauge Error Estimates. *J. Atmosph. Ocean. Technol.*: **18**(12), 1989–2002.
- Vauclair F., Y. du Penhoat, 2001: Interannual variability of the upper layer of the tropical Atlantic ocean from in-situ data between 1979 and 1999, *Climate. Dyn.*, **17**, 527–546.

2000

- Segschneider, J., M. Balmaseda, and D.L.T Anderson, 2000: Anomalous temperature and salinity variations in the tropical Atlantic: possible causes and implications for the use of altimeter data. *Geophys. Res. Lett.*, **27**(15), 2281.
- Servain J., I. Wainer, H.L. Ayina, and H. Roquet, 2000: The relationship between the simulated climatic variability modes of the tropical Atlantic. *Int. J. Climatol.*, **20**, 939–953.
- Wentz, F.J., C. Gentemann, D. Smith, and D. Chelton, 2000: Satellite Measurements of Sea Surface Temperature Through Clouds. *Science*, **288**: 847–850, 5 May.

1999

- Pailler, K., B. Bourlès, and Y. Gouriou, 1999: The barrier layer in the western tropical Atlantic Ocean. *Geophys. Res. Lett.*, **26**(14), 2069–2072.
- Servain, J., I. Wainer, J. P. McCreary, and A. Dessier, 1999: Relationship between the equatorial and meridional modes of climatic variability in the tropical Atlantic, *Geophys. Res. Lett.*, **26**(4), 485–488, doi 10.1029/1999GL900014.

1998

- Hackert, E. C., R. N. Miller, and A. T. Busalacchi, 1998: An optimized design for a moored instrument array in the tropical Atlantic Ocean. *J. Geophys. Res.*, **103**(C4), 7491–7509.
- Servain J., A. Busalacchi, M.J. McPhaden, A.D. Moura, G. Reverdin, M. Vianna and S. Zebiak, 1998: A Pilot Research Moored Array in the Tropical Atlantic (PIRATA). *Bull. Amer. Meteorol. Soc.*, **79**, 2019–2031.

Other (Reports, proceedings, etc.)

2008

- Bourlès, B., P.Freitag, and M.McPhaden, 2008: Moored buoy networks: The key to understanding the tropical Oceans, *Argos Forum* #67, November 2008.
- Hernandez, F., and L. Crosnier, 2008: List of internal metrics for the MERSEA-GODAE Global Ocean: Specification for implementation. MERSEA WP5. Project deliverables D5.4.5, ed. By *Mercator Océan*, Toulouse, MERSEA-WP05-MERCA-STR0015.02A, pp. 75.
- Lebel, T. & B. Bourlès, 2008: Le climat tropical de l'Atlantique à l'Afrique sous l'oeil d'AMMA-Catch et PIRATA, *Revue Sciences au Sud de l'IRD*, n°45, juillet-août 2008.

2007

- Bourlès, B., P. Brandt, G. Caniaux, M. Dengler, Y. Gouriou, E. Key, R. Lumpkin, F. Marin, R.L. Molinari, and C. Schmid, 2007: African Monsoon Multidisciplinary Analysis (AMMA): Special measurements in the tropical Atlantic. *CLIVAR Exchanges*, 41(12), 2, 7-9.
- Lau, K. M., and J. M. Kim, 2007: How nature foiled the 2006 hurricane forecasts. *EOS Trans. AGU*, 88, 105-107.
- Lebel, T., D. J. Parker, B. Bourlès, A. Diedhiou, A. Gaye, J. Polcher, J.-L. Redelsperger, and C. D. Thorncroft, 2007: AMMA field campaigns in 2005 and 2006. *GEWEX News*, 17(1).

2006

- Ayina, L.H., A. Bentamy, 2006: "Une approche pour améliorer les flux turbulents estimés à partir des mesures satellite", *Submitted to electronic review «Revue de Recherche et d'application en télédétection »* (<http://www.teledetection.net/>).
- Bunge, L., C. Provost, A. Kartavtseff and B. Bourlès, 2006: Horizontal velocity variability at 10°W and 23°W on the equator, *AGU General Assembly*, Honolulu, HI.
- Lumpkin, R., R.L. Molinari, and M. JMcPhaden, 2006: A Northeast Extension of the PIRATA Array. *White Document*, AOML/NOAA, Miami, FL, USA.
- Morris, V., P. Clemente-Colón, N.R. Nalli, E. Joseph, R.A. Armstrong, Y. Detrés, M.D. Goldberg, P.J. Minnett and R. Lumpkin, 2006: Measuring Trans-Atlantic Aerosol Transport from Africa. *EOS Trans. AGU*, 87(50).
- Nobre, P., 2006: The PIRATA South Western Extension. *8th International Conference on Southern Hemisphere Meteorology and Oceanography. Session: Addressing gaps in SH observing systems*. Foz do Iguaçu, Brazil.
- Sato, O. T.; Polito, P. S., 2006: Long-term trend in the oceanic heat storage of the South Atlantic estimated from altimeter and PIRATA data. *8th International Conference on Southern Hemisphere Meteorology and Oceanography. Session: Role of the SH on oceans and climate*. Foz do Iguaçu, Brazil.
- Urbano, D. F. and P. Nobre, 2006: Velocity field at the PIRATA sites: Model output vs. observations. *8th International Conference on Southern Hemisphere Meteorology and Oceanography. Session: Role of the SH on oceans and climate*. Foz do Iguaçu, Brazil.

2005

- Arhan, M., A. M. Treguier, B. Bourlès, S. Michel, 2005: Diagnosing the annual cycle of the Equatorial Undercurrent in the Atlantic Ocean from a General Circulation model ([EGU05-A-03458](#)), *EGU General Assembly*, Vienna.
- Balmaseda, M.A., D.P. Dee, A.P. Vidard, and D.L.T. Anderson, 2005: A Multivariate Treatment of Bias for Sequential Data Assimilation: Application to the Tropical Oceans. *ECMWF Tech Memorandum No 480*.

- Bidlot, J.R., 2005: Impact of using the actual anemometer height when assimilating DRIBU surface wind data. *ECMWF Memorandum Research Department*, 14pp.
- Bourlès, B., 2005: Environmental Research observatory: PIRATA, summary document, Report done for the French Commission Scientifique Océan Atmosphère (CSOA): 44pp.
- Caniaux, G., H. Giordani, B. Bourlès and Y. DuPenhoat, 2005: Air-sea interactions during the EGEE/AMMA experiment: necessary requirements, *Extended abstract for OSI SAF (Ocean and Sea Ice Satellite Application Facility) Workshop*, Perros-Guirec, France.
- Le Borgne, P., Gérard Legendre, Anne Marsouin, 2005: OSI SAF radiative fluxes, *Extended abstract for OSI SAF (Ocean and Sea Ice Satellite Application Facility) Workshop*, Perros-Guirec, France.
- Provost, C., N. Chouaib, A. Spadone, L. Bunge, S. Arnault, and E. Sultan, 2005: Interannual variability of the zonal sea surface slope in the equatorial Atlantic during the 1990s. *Advances in Space Res. (COSPAR publication)*, **37**, 823-831.
- Vidard, A., D.L.T. Anderson, and M. Balmaseda, 2005: Impact of ocean observation systems on ocean analysis and seasonal forecasts. *ECMWF Tech Memorandum No 460*.

2004

- Busalacchi, A.J., R. Boscolo, B. Dickson, A. Piola, J. Servain, and N. Zeng, 2004: Climate observing system for the Atlantic sector. *CLIVAR Exchanges*, Vol. 9, N° 3, pp 8-11 +p16.
- Bourlès, B., J. Servain et S. Planton, 2004: l'ORE PIRATA, *colloque ORE du CNRS/INSU*, Paris, 15-16 Nov.
- Cousin, R., F. Hernandez, and Y. Du Penhoat, 2004: Apport du réseau de mouillages météocéaniques PIRATA pour l'océanographie opérationnelle, *La lettre trimestrielle MERCATOR-OCEAN*, 15, 2-8, October.
- Durand B., L.H. Ayina, A. Bentamy et J. Servain, 2004: High resolution satellite-derived surface turbulent fluxes over the Atlantic Ocean. *XIII Congresso Brasileiro de Meteorologia*. Fortaleza, Brazil, Sept.
- Durand B., Servain J., Laurent H., and Machado L. A., 2004: Fluxo de calor latente no Atlântico tropical, convecção sobre o Nordeste e a rede PIRATA. *Extended Proceedings XIII Congresso Brasileiro de Meteorologia*. Fortaleza, Brazil, Sept.
- Johnson, M., et al., 2004: Ship Time Needs for PIRATA and the Tropical and South Atlantic Observing System: A Special Report by the Atlantic Observations Working Group (AOWG), November.
- Kartavtseff, Annie, 2004: Mouillage courantométrique PIRATA 10°W ; Mai 2003- Février 2004 ; Internal Report LODYC, n°2004-01, May.
- Nobre, P., E. Campos, P.S. Polito, O.T Sato, and J. Lorenzetti (with contribution by A.Robertson, M.Vianna, J.Servain, and I.Wainer), 2004: PIRATA Western Extension Scientific Rational Report. *INPE/CPTEC Special Report, Cachoeira Paulista, SP*, Brazil.
- Rouault, M., and Coll., 2004: PIRATA South-Eastern Extension White Paper. *UFCT Special Report*, Cape Town, South Africa.
- Servain, J., 2004: PIRATA, Pirata et Mercator : Des bouées ancrées observent l'Atlantique tropical. Fiche Actualité MERCATOR (« Chroniques mercatoriennes »), 23 March.
- Servain J., 2004: Introduction of the Session "Scientific results from the PIRATA Program (1997-2004)". *Joint American and Canadian Geophysical Unions meeting*, Montreal, Canada, May.
- Servain J., Hervé M., and B. Durand, 2004: A real-time diagnostic analysis of the PIRATA observations. *Joint American and Canadian Geophysical Unions meeting*, Montreal, Canada, May.

- Servain J., 2004: O Programa PIRATA: CAMISA-PIRATA, O programa PIRATA : Objectivos, Realizações, Perspectivas. *Extended Proceeding XIII Congresso Brasileiro de Meteorologia*. Fortaleza, Brazil, Sept.
- Servain J., B. Boulès, et S. Planton, 2004: Le Programme PIRATA : Réalisations, Exploitation, Développement. *Recueil de Communications de l'Atelier Expérimentation et Instrumentation (AEI)*. Paris, France, 6pp, March.
- Servain J., 2004: O Programa PIRATA: CAMISA-PIRATA, O programa PIRATA : Objectivos, Realizações, Perspectivas. *Extended Proceeding XIII Congresso Brasileiro de Meteorologia*. Fortaleza, Brazil, Sept.
- Servain J., Durand B., Ayina L.-H. and Bentamy A., 2004: High resolution satellite and PIRATA derived surface turbulent fluxes over the Atlantic Ocean. *Extended Proceeding XIII Congresso Brasileiro de Meteorologia*. Fortaleza, Brazil, Sept.
- Siqueira, L.S.P, and P.Nobre, 2004: Contrasting the errors in sea surface temperature and surface heat flux by a coupled GCM and its oceanic component, *XII Congresso Brasileiro de Meteorologia*, Fortaleza, Brazil, Sept.

2003

- Balmaseda, M.A., 2003: Ocean data assimilation for seasonal forecasts. *ECMWF Seminar Proceedings. Seminar on Recent developments in data assimilation for atmosphere and ocean*, 8-12 September 2003, 301-326.
- Boulès, B., 2003: On the Gulf of Guinea and the West African Monsoon, *CLIVAR Exchanges Letters*, n°27, Vol. 8, n°2/3, *CLIVAR-Africa*, 15-16, Sept.
- Grelet J., Servain J., Lorenzetti J. et Vianna M. (in collaboration with A. Kartavtseff, R. Chuchla et B. Boulès, 2003: Recueil de données Météo-Océaniques durant les campagnes PIRATA : Années 1997-2003. *Publication IRD-Brest*.
- Kartavtseff A., 2003: Mouillages courantométriques PIRATA 10W et 23W. Dec 2001-Dec 2002. Internal Report LODYC n°2003-01.
- Peter, A.C., et Y. du Penhoat, 2003: Etude de la couche de mélange océanique et bilan de chaleur dans le Golfe de Guinée, *Journées prospectives du PATOM, CIC de Météo France*, Toulouse. Dec.
- Provost C. et J. Servain, 2003: -ACI CLIMAT PIRATA– BILAN scientifique, technique et financier de la partie mouillages équatoriaux, Report done for the French ACI-Climat.
- Vera C. S., Hazeleger, W., Wainer, I., and Servain, J., 2003: Climate Variability in the South Atlantic Ocean. « *White Document* » prepared for the « *Workshop SACOS : South Atlantic Climate Observing System* », Angra dos Reis, RJ, Brazil, Feb.

2002

- Balmaseda, M.A., 2002: Dealing with Systematic error in ocean data assimilation. ECMWF Workshop on the Role of the Upper Ocean in Medium and Extended Range Forecasting, 3-15 Nov 2002.
- Boulès, B., 2002: Atlantique Equatorial : des courants suivis à la trace..., *Fiches d'Actualités Scientifiques de l'IRD*, n°163, Oct. 2002.
- DuPenhoat, Y., N. Ferry, C. Maes, J.Merle, S. Arnault, collab.: L. Fleury, E. Greiner, M. Benkiran, A. Lazar, G. Eldin et B. Boulès, 2002: Validation des systèmes MERCATOR en zone tropical: océans Pacifique et Atlantique, *Journées Mercator-Coriolis*, LEGOS France, Sept 2002.
- Marchand, P., and J. Servain, 2002: NOR-50: Fast research vessel for operational oceanography - Implementing PIRATA & Argo programs in the Tropical & South Atlantic in a practical, economic way. *Sea Technology*, **43**(6), 49-54.

- Michel S., and A.-M. Treguier, 2002: Sensitivity of the Equatorial Undercurrent to mixing parameterisations in the CLIPPER model. *Report IFREMER/DRO/LPO n°02-16*, 35pp.
- Servain J., 2002: The status and perspective of the PIRATA Program. A CLIVAR Workshop on the Dynamics and Predictability of the Atlantic ITCZ and its Regional Climatic Influences. *A CLIVAR Workshop on the Dynamics and Predictability of the Atlantic ITCZ and its Regional Climatic Influences*. IRI, Palisades, NY, USA, Sept 2002.

2001

- Ayina H. L., and J. Servain, 2001: Climate modulation in a general circulation model of the tropical Atlantic. *CLIVAR Tropical Atlantic Workshop*, Paris, France, Sept, 2001.
- Cariou S., J. Servain, R. Person, et Y. Roubaud, 2001: Study of the tuna behaviour by acoustic simulation. *CLIVAR Tropical Atlantic Workshop*, Paris, France, Sept 2001.
- Clauzet G., I. Wainer, et J. Servain, 2001: Time-scales of variability from the high-frequency PIRATA data (1997-2000). *Joint IAPSO/IABO Assembly: 2001 An Ocean Odyssey*. Mar del Plata, Argentina, Oct 2001.
- Michel, S., A-M. Treguier, R. Schopp, Y. Quilfen, A. Bentamy, 2001: Comparison of two Atlantic simulations forced by ECMWF and ERS wind climatologies, *CLIVAR workshop on Tropical Atlantic Variability*, Paris, Sept 2001.
- Servain, J. and J. Lorenzetti, 2001: PIRATA-8 Meeting Report. *CLIVAR-Exchanges No. 22, Newsletter of the CLIVAR Program, Vol. 6, No. 4*, Dec. 2001.
- Quilfen, Y., A. Bentamy, S. Michel, A-M. Treguier, R. Schopp, 2001: Impact of the wind from ERS satellites and from ECMWF reanalysis in the CLIPPER Atlantic model : first results, *AGU meeting on scatterometry*, Los Angeles, Dec 2001.

1999

- McPhaden M. J., P.Freitag, J.Servain and E. Josse, 1999: Effects of fishing activity on tropical moored buoy arrays. *Actes du colloque Caraïbe-Martinique "Pêche thonière et dispositifs de concentration de poissons"*, 15-19 octobre 1999. Edits. J.-Y. Le Gall, P. Cayré & M. Taquet. p. 154.
- Segschneider, J., M. Balmaseda, D. Anderson and O. Alves, 1999: On the risks of assimilating real time oceanic observations, limitations of a univariate assimilation scheme, and how to benefit from vandalism, *CLIVAR Exchanges*, No. 13, Sept. 1999.
- Servain J., and the PIRATA SSC, 1999: The PIRATA program and a proposed expansion through the South East. *Proceedings of the 10th Southern African Marine Science Symposium (SAMSS 2000) Land, Sea and People in the New Millenium, 22 to 26 November, 1999*, Wilderness, South Africa, p 131.
- Vianna M.L., Servain J., and Busalacchi A.J., 1999: PIRATA: Recent results and future perspectives. *CLIVAR Exchanges*, Vol. 4, N° 3, 17- 24.
- Vianna M.L., Servain J., and Busalacchi A.J., 1999: The PIRATA Program: Monitoring Tropical Atlantic Waters. *Sea Technology*, Vol. 40, N° 10, 10-15.

1998

- Servain J., and M. Vianna, 1998: Pilot research moored array in the tropical Atlantic - PIRATA. Program Status Report in *TAO Implementation Panel Report of the Sixth Session, Reading, England, 4-6 November 1997, GOOS Report No. 36, GCOS Report No. 43, ICPO Publication Series No. 13*, p 10.
- Servain J., and Group PIRATA, 1998: The PIRATA program: An extension of the TAO array in the Atlantic. *Conférence Internationale Abidjan'98 "Variabilité des Ressources en Afrique au XX^{ème} Siècle"*, *Recueil des Posters, 16-19 novembre 1998*, Abidjan, Côte d'Ivoire, 157-161.

Servain J., 1998: PIRATA Status Report. *TAO Implementation Panel Report of the Seventh Session, Abidjan, Côte d'Ivoire, 11-13 November 1998, GOOS Report No. 68, GCOS Report No. 52, ICPO Publication Series No. 26, 10-11.*

1997

Reverdin, G, J. Servain and S.Planton, 1997 : Réseau de mouillages PIRATA dans l'Atlantique tropical. *Atelier " Expérimentation et Instrumentation ", 29-30 octobre 1997, Auditorium du CNRS, Campus Michel Ange, Paris 16°, 7-12.*

Servain J., 1997: The PIRATA program: An extension of the TAO array in the Atlantic. Program Status Report in *TAO Implementation Panel Report of the Fifth Meeting, Goa, India, 18-21 November 1996, GCOS Report No. 31, ICPO Publication Series No. 5, GOOS Report No. 97/1, 15-16.*

Servain J., 1997: Pilot Research Moored Array in the Tropical Atlantic. *Annales Geophysicae, Supplement II to Volume 15, PartII, Hydrology, Oceans, Atmosphere & Nonlinear Geophysics, C 410.*

Servain J., H.L. Ayina, and H.Roquet, 1997: Et si PIRATA avait été mis en place dès 1979 ! *Recueil des Actes, Symposium International Surveillance des Océans à l'Horizon 2000 : Une Approche Intégrée, 15-17 octobre 1997, Biarritz, France, 4 pp.*

1996

Servain J., 1996: Le Programme PIRATA (Pilot Research Moored Array in the Tropical Atlantic). *Colloques et Congrès de Météo-France, Atelier de Modélisation de l'Atmosphère, Toulouse, 3-4 décembre 1996, Centre National de Recherches Météorologiques, 3-8*