

## **Gary T. Mitchum**

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## **Biographical Information**

### **Education**

1984 Ph.D., Florida State University, Physical Oceanography.  
1980 B.S. (magna cum laude), Florida State University, major in Physics with minor in Mathematics.

### **Professional Experience**

2002 - present Professor, Department then College of Marine Science, USF  
1996 - 2002 Associate Professor, Department of Marine Science, USF  
1996 - 2000 Affiliate faculty, Department of Oceanography, UH Manoa  
1992 - 1996 Associate Researcher, Department of Oceanography, UH Manoa.  
1987 - 1992 Assistant Researcher, Department of Oceanography, UH Manoa.  
1985 - 1987 Postdoctoral Researcher at the UH Manoa with Klaus Wyrski.

### **Honors and awards**

Outstanding Review Paper award, NOAA/ERL for McPhaden et al. (1998)  
Honorable Mention, NMFS, Best paper in *Fishery Bulletin* for Polovina and Mitchum (1992)  
1992 AGU Editor's Citation for Excellence in Refereeing  
Florida State University Fellowship (1981-1982)  
4-year National Merit Scholarship at the Florida State University  
Honorary societies: Phi Beta Kappa, Phi Kappa Phi, Sigma Pi Sigma (Physics)

### **Professional Society Memberships**

American Geophysical Union  
American Meteorological Society

## **Publications**

### **Manuscripts in press, in review or in preparation:**

Li, J., **Mitchum, G.T.**, J. Polovina, C. Holland, and M. Seki, Physical Controls on Swordfish Catch Rates along the Pacific Subtropical Front. To be submitted to *J. Geophys. Res. Oceans*.

Thompson, P., **G.T. Mitchum**, C. Vonesch and J. Li, Storminess Changes in the Southeastern United States during the 20<sup>th</sup> Century. To be submitted to *J. Geophys. Res. Oceans*.

Bernier, N., **G.T. Mitchum**, K. Doran and Y. Xu, A Generalized Method for the Calibration of Satellite Altimeters with Tide Gauge Sea Levels. To be submitted to *J. Atmos. Oceanic Tech.*

Doran, K., and **G.T. Mitchum**, Improved Land Motion Estimates at Tide Gauge Stations from GPS data. To be submitted to *J. Geophys. Res. Oceans*.

### **Refereed publications:**

2010 **Mitchum, G.T.**, R. S. Nerem, M.A. Merrifield and R. Gehrels, 20th Century Sea Level Change Estimates From

Tide Gauges and Altimeters, In: Understanding Sea-level Rise and Variability, Eds. J.A. Church, P.L. Woodworth, T. Aarup and W.S. Wilson. Blackwells Publishing, London.

- 2010 Church, J., T. Aarup, P. Woodworth, W. Wilson, R. Nicholls, R. Rayner, K. Lambeck, **G.T. Mitchum**, K. Steffen, A. Cazenave, G. Blewitt, J. Mitrovica and J. Lowe, Sea-level rise and Variability: Synthesis and Outlook for the Future, In: Understanding Sea-level Rise and Variability, Eds. J.A. Church, P.L. Woodworth, T. Aarup and W.S. Wilson. Blackwells Publishing, London.
- 2010 Beckley, B., N. Zelensky, S. Holmes, F. Lemoine, R. Ray, **G.T. Mitchum**, S. Desai and S. Brown, Assessment of the Jason-2 Extension to the TOPEX/Poseidon, Jason-1 Sea-Surface Height Time Series for Global Mean Sea Level Monitoring, *Mar. Geod.*, **33** (1), 447-471.
- 2010 Nerem, R.S., D. Chambers, C. Choe and **G.T. Mitchum**, Estimating mean sea level change from the TOPEX and Jason altimeter missions, *Mar. Geod.*, **33** (1), 435-446.
- 2010 Merrifield, M.A., S. Gill, E. Leuliette, L. Miller, **G.T. Mitchum**, S. Nerem and P. Woodworth, Sea level variations, in "State of the Climate in 2009", *Bull. Amer. Met. Soc.*, **91**(7), S69-72.
- 2009 Merrifield, M.A., S. T. Merrifield and **G.T. Mitchum**, Evidence for a recent acceleration of global sea level rise. *J. Climate*, **22**, 5772-5781, doi:10.1175/2009JCLI2985.1.
- 2009 DeLong, K., T. Quinn, R. Poore and **G.T. Mitchum**, Evaluating highly resolved paleoclimate records in the frequency domain for multidecadal-scale variability, *Geophys. Res. Lett.*, **36**, L20702, doi:10.1029/2009GL039742.
- 2009 Merrifield, M.A. R.S. Nerem, **G.T. Mitchum**, L. Miller, E. Leuliette, S. Gill and P. Woodworth, Sea level variations, 2008 annual assessment, in "State of the Climate in 2008", *Bull. Amer. Met. Soc.*, **90**(8), S62-65.
- 2008 Merrifield, M.A., S. Gill, **G. T. Mitchum**, and P. L. Woodworth, Sea Level Variations, in State of the Climate in 2007, D.H. Levinson and J.H. Lawrimore, eds., *Bull. Amer. Met. Soc.*, **89**, S51-S52, doi:10.1175/bams-89-9-StateoftheClimate.
- 2007 Johnson, E., F. Bonjean, G. Lagerloef, J. Gunn, and **G.T. Mitchum**, Validation and Error Analysis of OSCAR Sea-surface Currents, *J. Atmos. Oceanic Tech.*, **24**, 688-701, doi: 10.1175/jtech1971.1.
- 2007 Merrifield, M., **G.T. Mitchum**, S. Gill and P. Woodworth, Sea Level, in State of the Climate in 2006, Arguez, A., , ed., *Bull. Amer. Met. Soc.*, **88**, S1-S135, doi:10.1175/bams-88-6-929.
- 2006 Nerem, R.S., A. Cazenave, D. Chambers, L. Fu, E. Leuliette and **G.T. Mitchum**, Comment on "Estimating future sea level change from past records" by Nils-Axel Morner, *Global and Planetary Change*, doi: 10.1016/j.gloplacha.2006.08.002.
- 2006 Merrifield, M., S. Gill, and **G.T. Mitchum**, Sea Level, in State of the Climate in 2005, Shein, K.A., ed., *Bull. Amer. Met. Soc.*, **87**, S28-S29.
- 2005 Cummins, P.F., G.S.E. Lagerloef, and **G.T. Mitchum**, A regional index of northeast Pacific variability based on satellite altimeter data, *Geophys. Res Letts.*, **32**, L17607, doi:10.1029/2005GL023642.
- 2005 Holland, C., and **G.T. Mitchum**, Interannual Volume Variability in the Tropical Pacific and Lagrangian Heat Transport Pathways, *J. Geophys. Res. Oceans*, **109**, C03017, doi: 10.1029/2004JC002466.
- 2004 Leuliette, E., R.S. Nerem, **G.T. Mitchum**, Calibration of TOPEX/Poseidon and Jason-1 altimeter data to construct a continuous record of mean sea level. *Marine Geodesy*, **27**, 79-94.
- 2004 **Mitchum, G.T.**, D.W. Hancock, III, G. Hayne and D. Vandemark, Blooms of  $\sigma^0$  in the TOPEX radar altimeter data. *J. Oceanic and Atmos. Tech.*, **21**, 1232-1245.
- 2003 Holland, C., and **G.T. Mitchum**, Interannual volume variability in the tropical Pacific. *J. Geophys. Res. Oceans*, **108** (C11), 33, doi:10.1029/2003JC001841.

- 2003 Lagerloef, G., R. Lukas, F. Bonjean, J. Gunn, **G.T. Mitchum**, M. Bourassa, and A. Busalacchi, El Nino Tropical Pacific Ocean surface current and temperature evolution in 2002 and outlook for early 2003. *Geophys. Res. Ltrrs.*, **30** (10), 1514, doi:10.1029/2003GL017096.
- 2002 Nerem, R., and **G.T. Mitchum**, Estimates of vertical crustal motion derived from differences of TOPEX/POSEIDON and tide gauge measurements. *Geophys. Res. Ltrrs.*, **29** (19), 1934, doi:10.1029/2002GL015037.
- 2002 Seki, M., J. Polovina, D. Kobayashi, R. Bidigare and **G.T. Mitchum**, An oceanographic characterization of swordfish (*Xiphias gladius*) longline fishing grounds in the springtime subtropical North Pacific. *Fisheries Oceanogr.*, **11**, 251-266
- 2002 Woodworth, P., C. Le Provost, L. Rickards, **G.T. Mitchum** and M. Merrifield. A review of sea-level research from tide gauges during the World Ocean Circulation Experiment. *Oceanography and Marine Biology*, **40**, 1-35.
- 2001 **Mitchum, G.T.**, R. Cheney, L.-L. Fu, C. Le Provost, Y. Menard and P. Woodworth, The future of sea surface height observations. In *Observing the Ocean for Climate in the 21<sup>st</sup> Century*, Bureau of Meteorology, Australia.
- 2001 Nerem, R., and **G.T. Mitchum**, Sea Level Change, in *Satellite Altimetry and Earth Sciences*, L. Fu and A. Cazenave (eds.), Academic Press.
- 2001 Gilbert, S., and **G.T. Mitchum**. Equatorial inertia gravity wave observations from TOPEX/Poseidon sea surface heights. *Geophys. Res. Ltrrs.*, **28**, 2465-2468.
- 2001 Holland, C., and **G.T. Mitchum**, Propagation of Big Island eddies. *J. Geophys. Res.*, **106**, 935-944.
- 2001 Nerem, R., and **G.T. Mitchum**, Observations of sea level change from satellite altimetry, in *Sea Level Rise : History and Consequences*, B. Douglas, M. Kearney and S. Leatherman (eds.), Academic Press.
- 2000 **Mitchum, G.T.**, and S. Chiswell, Coherence of internal tide variations along the Hawaiian Ridge. *J. Geophys. Res.*, **105**, 28653-28662.
- 2000 **Mitchum, G.T.**, An improved calibration of satellite altimetric heights using tide gauge sea levels with adjustment for land motion. *Marine Geodesy*, **23**, 145-166.
- 1999 Nerem, R., D. Chambers, E. Leuliette, **G.T. Mitchum** and B. Giese, Variations in global mean sea level associated with the 1997-98 ENSO event. *Geophys. Res. Letters*, **26**, 3005-3009.
- 1999 Lagerloef, G., **G.T. Mitchum**, R. Lukas and P. Niiler, Tropical Pacific Near Surface Currents Estimated From Altimeter, Wind and Drifter Data. *J. Geophys. Res.*, **104**, 23313-23326.
- 1998 Meyers, S.D., A. Melsom, **G.T. Mitchum** and J.J. O'Brien, Detection of the fast coastal Kelvin Wave teleconnection due to El Nino-Southern Oscillation. *J. Geophys. Res.*, **103**, 27,655-27,663.
- 1998 **Mitchum, G.T.**, Monitoring the stability of satellite altimeters with tide gauges. *J. Atmos. Oceanic Tech.*, **15**, 721-730.
- 1998 McPhaden, M., A. Busalacchi, R. Cheney, J.-R. Donguy, K. Gage, D. Halpern, M. Ji, P. Julian, G. Meyers, **G.T. Mitchum**, P. Niiler, J. Picaut, R. Reynolds, N. Smith, K. Takeuchi, The Tropical Ocean Global Atmosphere (TOGA) observing system: A decade of progress. *J. Geophys. Res.*, **103**, 14169-14240.
- 1997 Ray, R., and **G.T. Mitchum**, Surface manifestation of internal tides in the deep ocean: Observations from altimetry and island gauges. *Prog. Oceanogr.*, **40**, 135-162.
- 1997 Potemra, J.T., R. Lukas, and **G.T. Mitchum**, Large-scale estimation of transport from the Pacific to the Indian Ocean. *J. Geophys. Res.*, **102**, 27795-27812.

- 1997 Nerem, S., B. Haines, J. Hendricks, J.-F. Minster, **G.T. Mitchum** and W. White, Improved determination of global mean sea level variations using TOPEX/POSEIDON altimeter data. *Geophys. Res. Lett.*, **24**, 1331-1334.
- 1996 Ray, R., and **G.T. Mitchum**, Surface manifestation of internal tides generated near Hawaii. *Geophys. Res. Lett.*, **23**, 2101-2104.
- 1996 **Mitchum, G.T.**, A context for the Hawaiian Ocean Timeseries measurements as estimated from TOPEX/POSEIDON altimetric heights. *Deep-Sea Res.*, **43**, 257-280.
- 1995 Polovina, J.J., **G.T. Mitchum** and G.T. Evans, Decadal and basin-scale variation in mixed layer depth and the impact on biological production in the Central and North Pacific, 1960-88. *Deep-Sea Res.*, **42**, 1701-1716.
- 1995 **Mitchum, G.T.**, and B.K. Kilonsky, Tropical sea level variability from altimeters. In *Oceanographic Application of Remote Sensing*, CRC Press, Boca Raton, 512 pp.
- 1995 **Mitchum, G.T.**, The source of 90-day oscillations at Wake Island. *J. Geophys. Res.*, **100**, 2459-2475.
- 1994 **Mitchum, G.T.**, Comparison of TOPEX sea surface heights and tide gauge sea levels. *J. Geophys. Res.*, **99**, 24,541-24,553.
- 1994 Polovina, J.J., **G.T. Mitchum**, N.E. Graham, M.P. Craig, E.E. DeMartini and E.N. Flint, Physical and biological consequences of a climate event in the Central North Pacific. *Fisheries Oceanogr.*, **3**, 15-21.
- 1994 Polovina, J.J., and **G.T. Mitchum**, Spiny lobster recruitment and sea level revisited: Results of a 1990 forecast. *Fish. Bull. U.S.*, **92**, 203-205.
- 1992 Polovina, J.J., and **G.T. Mitchum**, Variability in spiny lobster *Panulirus marginatus* in the Northwestern Hawaiian Islands. *Fish. Bull. U.S.*, **90**, 483-493.
- 1990 Wyrski, K., and **G.T. Mitchum**, Interannual differences of GEOSAT altimeter heights and sea level: The importance of a datum. *J. Geophys. Res.*, **95**, 2969-2975.
- 1990 **Mitchum, G.T.**, and R. Lukas, Westward propagation of annual sea level and wind signals in the western Pacific Ocean. *J. Climate*, **3**, 1102-1110.
- 1989 Roach, D., **G.T. Mitchum** and K. Wyrski, Length scales of interannual sea level variability along the Pacific margin. *J. Phys. Oceanogr.*, **19**, 122-128.
- 1988 **Mitchum, G.T.**, and K. Wyrski, An overview of Pacific sea level variability. *Marine Geodesy*, **12**, 235-245.
- 1987 **Mitchum, G.T.**, and R. Lukas, Latitude-frequency structure of Pacific sea level variance. *J. Phys. Oceanogr.*, **17**, 2362-2365.
- 1987 **Mitchum, G.T.**, Trade wind fluctuations associated with El Niño-Southern Oscillation events. *J. Geophys. Res.*, **92**, 9464-9468.
- 1987 **Mitchum, G.T.**, A bias in the satellite-observed low-level cloud motion winds over the central tropical Pacific. *J. Geophys. Res.*, **92**, 3861-3865.
- 1986 **Mitchum, G.T.**, and A.J. Clarke, Evaluation of frictional, wind forced long wave theory on the West Florida Shelf. *J. Phys. Oceanogr.*, **16**, 1029-1037.
- 1986 **Mitchum, G.T.**, and A.J. Clarke, The frictional nearshore response to forcing by synoptic scale winds. *J. Phys. Oceanogr.*, **16**, 934-946.
- 1983 Cragg, J., **G.T. Mitchum** and W. Sturges, Wind-induced sea-surface slopes on the West Florida Shelf. *J. Phys. Oceanogr.*, **13**, 2201-2212.

- 1982 **Mitchum, G.T.**, and W. Sturges, Wind-driven currents on the West Florida Shelf. *J. Phys. Oceanogr.*, **12**, 1310-1317.
- 1981 Burnett, W.C., and **G.T. Mitchum**, Proton-Induced X-ray Emission analysis of marine particulates. *Nucl. Instr. and Meth.*, **181**, 231-238.

**Selected non-refereed publications:**

- 2007 Robinson, M., and **G.T. Mitchum**, *A Method For Creating A Global Real-Time Sea Surface Height Product from the Optimal Combination of Existing AVISO And Naval Research Laboratory Products*, Technical report prepared for Earth and Space Research, Seattle, WA.
- 2007 **Mitchum, G.T.**, and R. Nerem, Sea Level Rise, Chapter in *Our Changing Planet – The View from Space*, NASA/Cambridge Press.
- 2006 Nerem, R.S., J. Choe, G. Born, E. Leuliette, D. Chambers, J. Ries, **G.T. Mitchum**, Assessments of Orbits for a Possible Jason-3 Mission, White paper for distribution to OSTM Science Working Team.
- 2004 Mitchum, G.T., Review of *Changing Sea Levels: Effects of Tides, Weather and Climate* by D. Pugh, **Limn. Ocean. Bull.**, **13**, 73-74.
- 2003 Woodworth, P., T. Aarup, M. Merrifield, **G.T. Mitchum** and C. LeProvost, Measuring Progress of the Global Sea Level Observing System. *EOS, Transactions, AGU*, **84** (50), 565-565.
- 2000 **Mitchum, G.T.** (ed.), Proceedings of an international workshop entitled *Ocean Circulation Science Derived from the Atlantic, Indian and Arctic Sea Level Networks*, held in Toulouse, France, 10-11 May 1999. Intergovernmental Oceanographic Commission, UNESCO, Paris, France, 157 pp.
- 2000 Mehta, V., E. Lindstrom, A. Busalacchi, T. Delworth, C. Deser, L.-L. Fu, J. Hansen, G. Lagerloef, W. Lau, S. Levitus, J. Meehl, **G.T. Mitchum**, W. White, Summary of the Proceedings of the NASA Workshop on Decadal Climate Variability. *Bull. Am. Met. Soc.*, **81**, 2983-2985.
- 2000 Nerem, S., R. Eanes, J. Ries and **G.T. Mitchum**, The use of a precise reference frame in sea level change studies, in *Towards an Integrated Global Geodetic Observing System (IGGOS)*, R. Rummel, H. Drewes, W. Bosch, and H. Hornik (eds.), Springer-Verlag, Munich.
- 1999 **Mitchum, G.T.**, R. Cheney, L.-L. Fu, C. Le Provost, Y. Menard, and P. Woodworth, The future of sea surface height observations, in *Proceedings of the OCEANOBS 99*, St. Raphael, France, October, 1999.
- 1999 Garzoli, S., D. Enfield, G. Reverdin, **G.T. Mitchum**, R. Weisberg, P. Chang, and J. Carton, COSTA: A climate observing system for the tropical Atlantic, in *Proceedings of the OCEANOBS 99*, St. Raphael, France, October, 1999.
- 1999 **Mitchum, G.T.**, R. Cheney, L.-L. Fu, C. Le Provost, Y. Menard, and P. Woodworth, Sea surface height observations from altimeters and tide gauges, *CLIVAR Exchanges*, **4** (3), 11-15.
- 1998 **Mitchum, G.T.**, A. Busalacchi, and G. Lagerloef, Studies of Tropical Pacific Variability. AVISO Altimetry Newsletter, Number 6, 77-79.
- 1998 **Mitchum, G.T.**, A Tide Gauge Network for Altimeter Calibration. In the *Proceedings of Methods for Monitoring Sea Level: GPS and Tide Gauge Benchmark Monitoring, GPS Altimeter Calibration*, Pasadena, CA, March, 1997 (eds. R. Neilan and P. Woodworth).
- 1998 **Mitchum, G.T.**, An Overview of Tide Gauge Measurements. In the *Proceedings of Methods for Monitoring Sea Level: GPS and Tide Gauge Benchmark Monitoring, GPS Altimeter Calibration*, Pasadena, CA, March, 1997 (eds. R. Neilan and P. Woodworth).
- 1997 **Mitchum, G.T.**, Altimeter Drift from Tide Gauges. AVISO Altimetry Newsletter, Number 5, 8-11.

- 1995 **Mitchum, G.T.**, Altimetric observations of Rossby wave variability near topography. Proceedings of Aha Hulikoa Conference, Honolulu, Hawaii, February, 1995.
- 1994 **Mitchum, G.T.**, B. Kilonsky and B. Miyamoto, Methods for maintaining a stable datum in a sea level monitoring system. IEEE Oceans Proceedings.
- 1993 **Mitchum, G.T.**, Principal component analysis: Basic methods and extensions. Proceedings of Aha Hulikoa Conference, Honolulu, Hawaii, March, 1993.
- 1990 **Mitchum, G.T.**, U.S. WOCE supports global sea level data collecton. WOCE Notes, 2 (6), 10-12.
- 1983 **Mitchum, G.T.**, and W. Sturges, On the wind stress – sea level power law. Technical report, Department of Oceanography, Florida State University.

## **Extramural Funding**

### **Pending Grants and Contracts**

NASA/IDS: Co-Investigator with Don Chambers, Contribution to “The Response of Sea Level to Changes in Climate: Has There Been a Fundamental Shift in the Rate of Sea Level Rise?” proposal headed by Nerem at the University of Colorado, \$213K (Mitchum’s portion only) for September 2010 to August 2013.

NOAA: Principal Investigator, Mitchum contribution to “Past and Future Variability of Sea Level, Storminess and Coastal Inundation in the Northern Gulf of Mexico” proposal headed by Dukhovskoy at the Florida State University, \$228K (Mitchum’s portion only) for January 2011 to December 2013.

### **Active Grants and Contracts**

NASA/OSTM: Principal Investigator, Mitchum contribution to “Studies of upper ocean dynamics related to the Pacific Decadal Oscillation using satellite altimeter data and derived velocity fields” proposal headed by Lagerloef at ESR, \$161K for March 2009 to June 2012.

NASA/OSTM: Principal Investigator, Mitchum contribution to “Building a Climate Data Record for Sea Level Change” proposal headed by Nerem at University of Colorado, \$162K for March 2009 to September 2012.

NASA/GSFC: Principal Investigator, Mitchum contribution to “Integrated Multi-mission Ocean Altimeter Data for Climate Research” proposal headed by Ray at GSFC, \$251K for October 2007 to September 2012.

NASA/IDS: Principal Investigator, Mitchum contribution to “An Independent Assessment of the Ice Melt Contribution to Sea Level Change” proposal headed by Nerem at University of Colorado, \$180K for June 2007 to June 2010, NCE to June 2011.

### **Projects completed at University of South Florida (1996-present)**

NOAA/NASA: Principal Investigator, “Development of Operational Products for the Calibration of Satellite Altimeters Against the Global Tide Gauge Network”, \$318K for September 2005 to August 2009.

NASA: Principal Investigator, “Mean Flow Effects on Mesoscale Eddy Propagation”, \$427K for September 2005 to July 2009.

NOAA/NASA: Principal Investigator, Mitchum contribution to “OSCAR-2: Ocean Surface Current Analyses Real-time” proposal headed by Lagerloef at ESR, \$277K for September 2005 to March 2009.

NASA/OST: Principal Investigator, Mitchum contribution to “An Investigation of Very Low Frequency Sea Level Change Using Satellite Altimeter Data” proposal headed by Nerem at University of Colorado, \$171K for July 2004 to March 2009.

NASA/IDS: Principal Investigator, Mitchum contribution to “A Multidisciplinary Investigation of Present-day Sea Level Change” proposal headed by Nerem at University of Colorado, \$173K for April 2004 to June 2008.

NASA/JPL: Principal Investigator, Mitchum contribution to “Using global terrestrial GPS measurements to unravel the emerging altimetric record of global sea-level change” headed by B. Haines at JPL, \$75K for January 2001 to June 2005.

NASA/JASON: Principal Investigator, Studies of tropical variability, \$278K for April 1998 to June 2005.

NOAA/NOPP: Principal Investigator, Mitchum contribution to “Establishing a NOAA Operational Data Center for Surface Currents Derived from Satellite Altimeters and Scatterometers: Pilot Study for the Tropical Pacific Including the Hawaiian and US Territorial Island” proposal headed by Lagerloef at ESR, \$190K for October 2001 to September 2004.

NASA/JASON: Principal Investigator, Mitchum contribution to “An investigation of very low frequency sea level change using altimeter data” headed by S. Nerem at University of Colorado, \$178K for June 1997 to April 2004.

NASA/JASON: Principal Investigator, Mitchum contribution to “A study of sigma naught bloom effects on radar altimeters” headed by G. Hayne at Wallops Flight Facility, \$110K for 1 April 1998 to 31 December 2003.

NOAA/CLIVAR: Principal Investigator, “Prospects for sea level data archaeology in the Atlantic”, \$40K for September 2000 to August 2001.

PFRP/NOAA: Principal Investigator, “Extension of PFRP investigation of swordfish catch in North Pacific”, \$48K for September 2001 to June 2002.

NASA: Principal Investigator, “El Nino/Southern Oscillation in the Antarctic Circumpolar Current”, \$66K for September 1, 1998 to August 31, 2001. This is funding for a NASA Fellowship won by Christina Holland based on her proposed dissertation research.

NOAA/PFRP: Principal Investigator, “Evaluation of remote sensing technologies for the identification of oceanographic features critical to pelagic fish distributions around the Hawaiian Archipelago”, \$179K for April 1, 1996 to Sep 30, 2000.

NASA/TPEM: Principal Investigator, “Studies of tropical Pacific variability”, \$146K for October 1, 1996 to Dec 31, 1999.

NOAA/OGP: Co-Principal Investigator (with M. Luther), USF portion of a proposal from a Consortium of Florida Universities for Regional Assessment of ENSO Impact in SSA, SNA and SA. Received \$30K for July 1, 1996 to December 31, 1997. Original USF proposed portion was \$90K of \$515K for entire Consortium, but NOAA cut funds for the overall project after year 1 and USF PIs dropped out of the collaboration.

NOAA/JIMAR: Principal Investigator, “Computing support for intercomparison of satellite and in situ sea levels”, \$22K for November 1, 1996 to October 1, 1997. Funding provided via an equipment transfer from UH to USF.

NASA/JPL: Principal Investigator, “Proposal to develop recommendations for upgrades to the in situ tide gauge network for calibration of the TOPEX/POSEIDON Extended Mission”, \$24K for July 1, 1996 to March 31, 1997.

### **Projects completed at University of Hawaii (1990-1995)**

NOAA/NOS: Principal Investigator, UH Sea Level Center, \$639K for April 1, 1995 to March 31, 1996.

NOAA/NESDIS: Principal Investigator, WOCE “Fast Delivery” Sea Level Center, \$66.6K for February 1, 1995 to January 31, 1996.

NASA/JPL: Co-Investigator (R. Lukas, PI), Studies of tropical ocean dynamics using the TOPEX/Poseidon altimeter-derived sea surface topography, \$1.348M for October 1, 1987 to January 31, 1996.

NOAA/PFRP: Principal Investigator, Evaluation of remote sensing technologies for the identification of oceanographic features critical to pelagic fish distributions around the Hawaiian Archipelago, \$78K for October 1, 1994 to September 30, 1995.

NOAA/NOS: Principal Investigator, UH Sea Level Center, \$2.595M for January 1, 1992 to March 31, 1995.

NOAA/NESDIS: Principal Investigator, Establishment of WOCE Sea Level Center, \$149K for February 1, 1993 to January 31, 1995.

NOAA/NOS: Co-Investigator (K.Wyrtki, PI), Indo-Pacific Sea Level Network and TOGA Sea Level Center, \$1.66M for January 1, 1990 to December 31, 1991.

NOAA/NOS: Co-Investigator (K.Wyrtki, PI), IGOSS Sea Level Program in the Pacific, \$113K for July 1, 1989 to June 30, 1990

NSF: Co-Investigator (K.Wyrtki, PI), Studies of Ocean Dynamics Using Sea Level Data, \$405K for August 1, 1989 to July 31, 1991.

## **Academic Activities**

### **Courses (at USF only)**

#### Fall 2010

- OCE 6050 (3 hrs) Physical Oceanography
- OCE 6934 (1 hrs) Problem Solving in Physical Oceanography
- OCE 6971 (3 hrs) Thesis for M. Robinson
- OCE 6972 (3 hrs) Directed Research for M. Robinson
- OCE 7980 (3 hrs) Thesis for P. Thompson
- OCE 7910 (3 hrs) Directed Research for P. Thompson

#### Spring 2010

- OCE 6972 (2 hrs) Thesis for K. Doran
- OCE 6972 (6 hrs) Directed Research for M. Robinson
- OCE 6971 (3 hrs) Thesis for M. Robinson
- OCE 7910 (3 hrs) Directed Research for P. Thompson
- OCE 7980 (6 hrs) Thesis for P. Thompson

#### Fall 2009

- OCE 6050 (3 hrs) Physical Oceanography
- OCE 6934 (1 hrs) Problem Solving in Physical Oceanography
- OCE 6971 (2 hrs) Thesis for K. Doran
- OCE 6971 (3 hrs) Thesis for M. Robinson
- OCE 6972 (6 hrs) Directed Research for M. Robinson
- OCE 7980 (6 hrs) Thesis for P. Thompson
- OCE 7910 (3 hrs) Directed Research for P. Thompson

#### Summer 2009

- OCE 6971 (2 hrs) Thesis for K. Doran
- OCE 6971 (6 hrs) Thesis for M. Robinson
- OCE 7980 (6 hrs) Thesis for P. Thompson

#### Spring 2009

- OCE 6934 (3 hrs) Marine Time Series Analysis
- OCE 6972 (2 hrs) Thesis for K. Doran
- OCE 6972 (1 hrs) Directed Research for M. Robinson
- OCE 6971 (3 hrs) Thesis for M. Robinson
- OCE 7910 (1 hrs) Directed Research for P. Thompson
- OCE 7980 (3 hrs) Thesis for P. Thompson

#### Fall 2008

- OCE 6971 (2 hrs) Thesis for K. Doran
- OCE 6972 (6 hrs) Directed Research for M. Robinson
- OCE 7910 (3 hrs) Directed Research for P. Thompson
- OCE 7980 (2 hrs) Thesis for K. DeLong



OCE 7980 (3 hrs) Thesis for P. Thompson

Summer 2008

OCE 6972 (6 hrs) Directed Research for M. Robinson  
OCE 7980 (2 hrs) Thesis for K. DeLong  
OCE 6971 (2 hrs) Thesis for K. Doran  
OCE 7910 (6 hrs) Directed Research for P. Thompson

Spring 2008

OCE 6934 (3 hrs) Decadal Climate Variations  
OCE 6972 (2 hrs) Thesis for K. Doran  
OCE 6972 (6 hrs) Directed Research for M. Robinson  
OCE 7980 (9 hrs) Thesis for K. DeLong  
OCE 7910 (6 hrs) Directed Research for P. Thompson

Fall 2007

OCE 6050 (3 hrs) Physical Oceanography  
OCE 6971 (2 hrs) Thesis for K. Sedwick  
OCE 6972 (9 hrs) Directed Research for M. Robinson  
OCE 7910 (6 hrs) Directed Research for P. Thompson  
OCE 7910 (9 hrs) Directed Research for K. DeLong

Summer 2007

OCE 6934 (3 hrs) Quantitative Time Series Analysis  
OCE 6972 (3 hrs) Directed Research for K. Sedwick  
OCE 6972 (3 hrs) Directed Research for M. Robinson  
OCE 6972 (3 hrs) Directed Research for K. DeLong  
OCE 6971 (3 hrs) Thesis for K. Sedwick  
OCE 7910 (3 hrs) Directed Research for P. Thompson

Spring 2007

OCE 6934 (3 hrs) Ocean Waves II  
OCE 6972 (3 hrs) Directed Research for K. Sedwick  
OCE 6972 (6 hrs) Directed Research for M. Robinson  
OCE 6971 (6 hrs) Thesis for K. Sedwick  
OCE 7910 (1 hrs) Directed Research for P. Thompson

Fall 2006

OCE 6934 (3 hrs) Ocean Waves I  
OCE 6972 (3 hrs) Directed Research for K. Sedwick  
OCE 6972 (3 hrs) Directed Research for M. Robinson  
OCE 6971 (6 hrs) Thesis for K. Sedwick  
OCE 7910 (3 hrs) Directed Research for P. Thompson

Summer 2006

OCE 6934 (3 hrs) Quantitative Time Series Analysis  
OCE 6972 (1 hrs) Directed Research for K. Sedwick  
OCE 6972 (1 hrs) Directed Research for M. Robinson  
OCE 6971 (2 hrs) Thesis for K. Sedwick  
OCE 7910 (3 hrs) Directed Research for P. Thompson

Spring 2006

OCE 6972 (3 hrs) Directed Research for K. Sedwick  
OCE 6972 (3 hrs) Directed Research for M. Robinson  
OCE 6971 (6 hrs) Thesis for K. Sedwick  
OCE 7910 (1 hrs) Directed Research for P. Thompson

Fall 2005

OCE 6050 (3 hrs) Physical Oceanography  
OCE 6971 (6 hrs) Thesis for K. Sedwick  
OCE 6972 (3 hrs) Directed Research for K. Sedwick  
OCE 6972 (3 hrs) Directed Research for M. Robinson  
OCE 7910 (1 hrs) Directed Research for P. Thompson

Summer 2005

OCE 6934 (2 hrs) Advanced Time Series Methods in Oceanography  
OCE 6971 (2 hrs) Thesis for K. Sedwick  
OCE 6972 (1 hrs) Directed Research for K. Sedwick  
OCE 6972 (4 hrs) Directed Research for M. Robinson

Spring 2005

OCE 6934 (3 hrs) Ocean Waves II  
OCE 6972 (6 hrs) Directed Research for K. Sedwick  
OCE 6972 (1 hrs) Directed Research for M. Robinson

Fall 2004

OCE 6972 (6 hrs) Directed Research for K. Sedwick  
OCE 6972 (1 hrs) Directed Research for M. Robinson

Summer 2004

OCE 6972 (2 hrs) Directed Research for K. Sedwick

Spring 2004

OCE 6934 (2 hrs) Climate Variability (teamed 50/50 with Terry Quinn)  
OCE 6972 (1 hrs) Directed Research for K. Sedwick

Fall 2003

OCE 6050 (3 hrs) Physical Oceanography  
OCE 6972 (1 hrs) Directed Research for K. Sedwick

Summer 2003

OCE 6972 (6 hrs) Directed Research for K. Sedwick

Spring 2003

OCE 6934 (3 hrs) Ocean Waves II  
OCE 6934 (3 hrs) Continental Shelf Dynamics  
OCE 7980 (5 hrs) Dissertation for C. Holland  
OCE 6971 (6 hrs) Thesis for J. Law  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for J. Law  
OCE 6972 (1 hrs) Directed Research for K. Sedwick

Fall 2002

OCE 6934 (3 hrs) Ocean Waves I  
OCE 7980 (8 hrs) Dissertation for C. Holland  
OCE 6971 (4 hrs) Thesis for J. Law  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (5 hrs) Directed Research for J. Law  
OCE 6972 (1 hrs) Directed Research for K. Sedwick

Summer 2002

OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (1 hrs) Directed Research for J. Law  
OCE 7980 (4 hrs) Dissertation for C. Holland  
OCE 6971 (1 hrs) Thesis for J. Law

Spring 2002

OCE 6934 (3 hrs) Marine Time Series Analysis  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for J. Law  
OCE 7980 (8 hrs) Dissertation for C. Holland  
OCE 6971 (6 hrs) Thesis for J. Law

Fall 2001

OCP 6050 (3 hrs) Physical Oceanography  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (4 hrs) Directed Research for J. Law  
OCE 7980 (8 hrs) Dissertation for C. Holland  
OCE 6971 (5 hrs) Thesis for J. Law

Summer 2001

OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (1 hrs) Directed Research for J. Law  
OCE 7980 (1 hrs) Dissertation for C. Holland  
OCE 6971 (1 hrs) Thesis for J. Law

Spring 2001

OCE 6908 (1 hrs) Independent Study (Physics) with K. Kilbourne  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for S. Gilbert  
OCE 6972 (3 hrs) Directed Research for J. Law  
OCE 7980 (8 hrs) Dissertation for C. Holland  
OCE 6971 (2 hrs) Thesis for S. Gilbert  
OCE 6971 (6 hrs) Thesis for J. Law

Fall 2000

OCP 6050 (3 hrs) Physical Oceanography  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (7 hrs) Directed Research for S. Gilbert  
OCE 6972 (6 hrs) Directed Research for J. Law  
OCE 7980 (8 hrs) Dissertation for C. Holland  
OCE 6971 (2 hrs) Thesis for S. Gilbert  
OCE 6971 (3 hrs) Thesis for J. Law

Summer 2000

OCE 6972 (1 hrs) Directed Research for S. Gilbert  
OCE 6972 (2 hrs) Directed Research for J. Law  
OCE 7980 (2 hrs) Dissertation for C. Holland  
OCE 6971 (1 hrs) Thesis for S. Gilbert

Spring 2000

OCE 6934 (3 hrs) Ocean Waves II  
OCE 7910 (1 hrs) Directed Research for C. Holland  
OCE 6972 (4 hrs) Directed Research for S. Gilbert  
OCE 6972 (3 hrs) Directed Research for J. Law  
OCE 7980 (3 hrs) Dissertation for C. Holland  
OCE 6971 (3 hrs) Thesis for S. Gilbert

Fall 1999

OCE 6934 (3 hrs) Continental Shelf Dynamics  
OCE 7910 (9 hrs) Directed Research for C. Holland  
OCE 6972 (4 hrs) Directed Research for S. Gilbert  
OCE 6972 (3 hrs) Directed Research for J. Law

Summer 1999

OCE 7910 (2 hrs) Directed Research for C. Holland  
OCE 6972 (2 hrs) Directed Research for S. Gilbert  
OCE 6972 (2 hrs) Directed Research for J. Law

Spring 1999

OCE 6934 (3 hrs) Marine Time Series Analysis  
OCE 7910 (6 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for S. Gilbert  
OCE 6972 (1 hrs) Directed Research for J. Law

Fall 1998

OCP 6050 (3 hrs) Physical Oceanography  
OCE 7910 (9 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for S. Gilbert  
OCE 6972 (1 hrs) Directed Research for J. Law

Summer 1998

OCE 7910 (2 hrs) Directed Research for C. Holland  
OCE 6972 (2 hrs) Directed Research for S. Gilbert

Spring 1998

OCE 6934 (3 hrs) Ocean Waves II  
OCE 7910 (6 hrs) Directed Research for C. Holland  
OCE 6972 (2 hrs) Directed Research for S. Gilbert

Fall 1997

OCE 6934 (3 hrs) Ocean Waves I  
OCE 7910 (5 hrs) Directed Research for C. Holland  
OCE 6972 (3 hrs) Directed Research for S. Gilbert  
OCE 6908 (2 hrs) Independent Study (Satellite Altimetry) for P. Filippi

Summer 1997

OCE 7910 (2 hrs) Directed Research for C. Holland  
OCE 6908 (2 hrs) Independent Study (Satellite Altimetry) for P. Filippi

Spring 1997

OCE 6934 (2 hrs) Marine Time Series Analysis  
OCE 6934 (3 hrs) Statistics for Marine Research - teamed with R. Wilson  
OCE 7910 (2 hrs) Directed Research for C. Holland

Fall 1996

OCP 6050 (3 hrs) Physical Oceanography  
OCE 6908 (1 hrs) Independent Study (Statistics) for K. Donaldson  
OCE 7910 (3 hrs) Directed Research for C. Holland

**Graduate student advising at USF**

Philip Thompson	PhD Advisor, 2005-present
Kristine DeLong	PhD Co-Advisor with Terry Quinn, 2006-2008
Christina Holland	PhD Advisor, 1996-2003
Mindy Robinson	MS Advisor, 2004-present
Kara Doran	MS Advisor, 2002-2010
Jason Law	MS Advisor, 1998-2003
Sherryl Gilbert	MS Advisor, 1997-2001

Sennai Habtes	Member of PhD Committee, 2010-present
Monica Wilson	Member of PhD Committee, 2009-present
Dan Otis	Member of PhD Committee, 2003-present
Lore Ayoub	Member of PhD Committee, 2006-2009
Marina Marrari	Member of PhD Committee, 2004-2008
Heidi Souder	Member of PhD Committee, 2006-2007
Yonggang Liu	Member of PhD Committee, 2004-2006
Jyotika Virmani	Member of PhD Committee, 1997-2005
Bob Helber	Member of PhD Committee, 1997-2003
Ruoying He	Member of PhD Committee, 1999-2002
Denis Nadeau	Member of PhD Committee, 1999-2001
Nan Schmidt	Member of PhD Committee, 1997-2001
M. Dotherow-McField	Member of PhD Committee, 1997-2001
Paola Filippi	PhD Co-advisor (with F. Muller-Karger), 1997-1997
Zhenjiang Li	Member of PhD Committee, 1996-1997

Charles Lichtenwalner	Member of MS Committee, 2005-2008
Kristine DeLong	Member of MS Committee, 2004-2006
Laura Fauver	Member of MS Committee, 2004-2005
Elizabeth Carnahan	Member of MS Committee, 2003-2005
Steve Gustafson	Member of MS Committee, 1996-1998, 2004 - 2006
Hali Kilbourne	Member of MS Committee, 2001-2003
Jack Parrish	Member of MS Committee, 1996-2002
Jennifer Jacukiewicz	Member of MS Committee, 2000-2002
Haiying Zhang	Member of MS Committee, 2000-2000
Matt Patterson	Member of MS Committee, 1997-1999
Jen Jarrell	Member of MS Committee, 1997-1999
Eric Siegel	Member of MS Committee, 1997-1999

### **Graduate student advising at UH**

Cheryl Kilstrom	Chair of MS Committee, 1994-2000
Jiye Yu	Chair of MS Committee, 1992-1997
Christina Munch	Chair of MS Committee, 1993-1996
James Potemra	Member of PhD Committee, 1992-1997
Jack Li	Member of PhD Committee, 1995-1996
Reka Domokos	Member of MS Committee, 1994-1996
Michael Sawyer	Member of MS Committee, 1992-1996
Kathryn Ozimek	Member of MS Committee, 1990-1991
George Parrish	Member of MS Committee, 1988-1992

### **Professional Service**

#### **College of Marine Science**

##### *Standing committees*

2008 - present	Space
2003 - present	CMS Tenure and Promotion Committee (Chair since 2004)
1996 - present	Curriculum
1996 - present	Student recruiting
1997 - present	Honors and Awards
1996 - present	Seminar (Chair until 2004)
2002 - 2004	Dean's Advisory Committee (Chair for 2003-2004)
1997 - 2002	Long-range planning
1996 - 2002	Computer

### *Ad hoc committees*

2009 - 2010	Fisheries Scientist Faculty Search Committee (Chair)
2009 - 2010	CMS Endowed Postdoctoral Associates Committee
2008 - 2009	Ocean-Atmosphere Modelling Search Committee
2008 - 2008	Remote Sensing and Fisheries Search Committee
2007 - 2008	Strategic Planning Committee
2004 - 2005	Ranked NTE Faculty Promotion Guidelines Committee
2005 - 2006	Post-retreat Planning Committee
2003 - 2005	Search Committee, Biological Oceanographer faculty position
2002 - 2003	Staff Reorganization Oversight Committee
2002 - 2003	CMS Endowed Postdoctoral Associates Committee
2002 - 2003	EPAY Committee
2001 - 2002	Building Program for the College of Marine Science
2002 - 2002	Sackett Prize Selection Committee
1997 - 1999	Education Degree Committee
1999 - 1999	Annual Faculty Review Committee

### **University**

2009 - 2010	CMS Dean Search Committee
2009 - 2010	Ad Hoc Committee on Tenure and Promotion Guidelines
2008 - 2009	Task Force on Faculty Roles, Rewards and Responsibilities
2006 - 2007	CMS Dean Search Committee
2005 - 2006	Mathematics search committee for ES&P on USF St. Pete campus
2005 - 2005	Discipline Committee (Chair) for R. Weisberg's nomination as Distinguished University Professor
2001 - 2002	Strategic Committee on Research (as Chair of Research Council)
2001 - 2002	Faculty Senate Executive Committee (as Chair of Research Council)
1999 - 2002	University Research Council (Chair for 2001-2002)
1998 - 1999	Computing in Support of Research
1996 - 1996	Graduate Council Outstanding Dissertation Prize, sub-committee for Physical Sciences

### **National**

2010 - 2010	Ocean Sciences panelist for the National Science Foundation
2009 - 2010	Review panel member for NASA Gulf of Mexico Climate Change program
2007 - 2007	Ocean Sciences panelist for the National Science Foundation
2000 - 2003	Associate Editor, Journal of Physical Oceanography
2000 - 2000	Review panel member for the NASA Oceanography Program
1998 - 1998	Ocean Sciences panelist for the National Science Foundation
1996 - 1997	Science Steering Group for NOAA/NOS Sea Level Observations
1996 - 1997	Organizing Committee for IGS/JPL Workshop on Tide Gauge Benchmarks
1992 - 1997	Advisory Panel for the Florida State University Sea Level Center
1995 - 1995	NOAA/NOS Global Sea Level Task Force
1993 - 1994	NOAA/NESDIS Advisory Panel for Information Management Project
1991 - 1992	NOAA/NOS Advisory Panel for Global Sea Level Project
1988 - 1990	U.S. WOCE Sea Level Implementation Panel (Chair)
1987 - 1989	U.S. WOCE Data Management Working Group

### **International**

2001 - present	Steering committee member, Pilot Project for TIGA under the IGS Governing Board
1999 - present	Chair of the GLOSS Science Steering Group
1998 - present	JASON/OSTM Science Working Team
1997 - present	IGS/PSMSL Technical Committee on Tide Gauge Positioning
1996 - present	Permanent Service for Mean Sea Level (PSMSL) Advisory Group
1987 - present	IUGG/IAPSO Commission on Mean Sea Level and Tides
1987 - present	Global Sea Level Observing System (GLOSS) Group of Experts
2008 - 2009	Organizer, IOC Workshop on Precise Vertical Motion Estimates at Tide Gauges
2005 - 2007	Member, NOAA/NPOES Altimeter Operational Algorithm Team

2005 - 2006	Steering committee, WCRP/JSC Sea Level Rise Workshop
2005 - 2006	Guest editor, Global sea level portion of Proceedings of Dynamic Planet 2005, Springer-Verlag
2003 - 2006	Steering committee member, IAG Planning Group for an International Altimeter Service
2003 - 2004	Chair, Local Organizing Committee for CLIVAR/GODAE/OSTST meeting in Nov 2004
2000 - 2004	IERS Working Group on ITRF Datum, ITRF2000 Sub-group
2000 - 2004	CLIVAR Ocean Observations Panel (ex officio member representing GLOSS)
1988 - 2000	TOPEX/Poseidon Science Working Team
1988 - 1989	International WOCE Data Management Panel

## **Scientific Meetings, Workshops, etc.**

### **Calendar year 2010**

#### *Ocean Surface Topography Science Team, Lisbon, Portugal, October 2010*

Beckley, B., F. Lemoine, N. Zelensky, R. Ray, S. Holmes, **G.T. Mitchum**, S. Desai, S. Brown and N. Tran, Assessment of Current Global and Regional Mean Sea Level Estimates Based on ITRF2008.

Hamlington, B., R. Leben, S. Nerem, **G.T. Mitchum** and K.-Y. Kim, Reconstructed Sea Level Time Series from Climate Monitoring.

Leuliette, E., R. Scharoo, **G.T. Mitchum** and L. Miller, Evaluating and Interpreting the Global and Regional Sea Level Climate Record.

Leuliette, E., L. Miller, R. Scharoo and **G.T. Mitchum**, Tide Gauge Calibrations and the Radar Altimeter Database System.

#### *Symposium on Vertical Rates from GNSS, Newcastle, United Kingdom, July 2010*

**G.T. Mitchum** (invited), A methodological update of tide gauge, GPS estimates of altimeter drift rates.

#### *IPCC Workshop on Sea Level Rise and Ice Sheet Instabilities, Kuala Lumpur, Malaysia, 21-24 June 2010*

Nerem, R.S., D.P. Chambers, B. Hamlington, R. Leben, **G.T. Mitchum**, T. Phillips and J. Willis, Observations of Recent Sea Level Change.

#### *Sea Level Rise 2010, Harte Research Institute, Corpus Christi, Texas, March 2010*

Mitchum, G.T. (invited), Sea Level Trends Measured from Space and Tide Gauges.

#### *Ocean Sciences, Portland, Oregon, February 2010*

Beckley, B., **G.T. Mitchum** and 8 others, Assessment of Current Estimates of Global and Regional Mean Sea Level from the TOPEX/Poseidon, Jason-1, and OSTM 17-year record.

Leuliette, E., R. Scharoo, L. Miller, J. Lillibridge and **G.T. Mitchum**, Evaluation of the Multiple-Altimeter Global and Regional Climate Record.

#### *Keeping our Heads Above Water: Surviving the Challenges of Sea-Level Rise in Florida, Lake Placid, Florida, January 2010*

Invited as a discussant and as a moderator for a session on "Adaptations Options for Sea-Level Rise in Florida"

### **Calendar year 2009**

#### *Fall AGU meeting, San Francisco, California, December 2009*

Beckley, B., R. Ray, F. Lemoine, N. Zelensky, D. Jacob, S. Holmes, S. Desai, S. Brown, **G.T. Mitchum** and R.S. Nerem, Integrated multi-mission altimeter data for climate research.

#### *Florida State University, December 2009*

Invited seminar - Sea level rise: What do tide gauges and altimeters really tell us?

#### *NASA Sea Level Workshop, Austin, November 2009*

**Mitchum, G.T.**, M. Merrifield and P. Thompson (invited), Tide gauge observations of sea level rise over the past century.

#### *NASA Ocean Surface Topography Mission, Science Working Team Meeting, Seattle, June 2009*

**Mitchum, G.T.**, and K. Doran, Global sea level rise uncertainty due to land motion and reference frame issues.

**Mitchum, G.T.**, M. Robinson, N. Bernier, R.S. Nerem, J. Choe, L. Miller, E. Leuliette, B. Beckley and M.

Merrifield, Tide gauge estimates of altimeter stability: Improved methods and updated results.  
Beckley, B., N. Zelensky, S. Holmes, F. Lemoine, R. Ray, S. Desai, S. Brown and **G.T. Mitchum**, Assessment of Jason-1 and OSTM global verification phase sea surface height collinear residuals.  
Dohan, K., J. Gunn, G. Lagerloef and **G.T. Mitchum**, Assessment of near real-time OSCAR surface currents.  
Nerem, R.S., J. Choe, T. Sazonova, D. Chambers, **G.T. Mitchum** and J. Ries, Extending a climate data record of sea level change with Jason-1 and Jason-2/OSTM data.  
Robinson, M., **G.T. Mitchum**, G. Lagerloef, F. Bonjean, J. Gunn and K. Dohan, Evaluating a real-time satellite-derived surface current product in the Intra-Americas Sea.

*IOC GLOSS Group of Experts XI, Paris, France, May 2009*

Invited as a sea level expert and as Chair of GLOSS Science Steering Group  
Chaired and organized a workshop on GPS measurements of land motion at tide gauges

*National Conference on Beach Preservation Technology, St. Petersburg Beach, Florida, February 2009*

**Mitchum, G.T.**, and N. Elko (invited), A review of what we really know about sea level change.

**Calendar year 2008**

*Ocean Sciences, Orlando, Florida, March 2008*

**Mitchum, G.T.**, and N. Bernier, Web access to satellite altimeter calibrations via the global tide gauge network  
Li, J., and **G.T. Mitchum**, Mean flow effects on the propagation pathways of eddies  
Gunn, J., F. Bonjean, G. Lagerloef, M. Robinson and **G.T. Mitchum**, Real-time surface currents for the global ocean using OSCAR.

*European Geophysical Union Annual Meeting, Vienna, Austria, April 2008*

Co-convenor of the session on global sea level rise  
Nerem, R.S., D. Chambers, **G.T. Mitchum** and J. Willis, What have we learned about sea level change from satellite gravity and altimeters measurements

*British Association for the Advancement of Science's Festival of Science, Liverpool, England, September 2008*

Invited talk on Sea Level Rise

*University of South Carolina, October 2008*

Invited seminar - Sea level rise: What do we know and what do we need to know?

*50<sup>th</sup> Anniversary Meeting of the National Council of University Research Administrators, Washington, DC, November, 2008*

Invited as a panelist in the Climate Change session and as a speaker on Sea Level Rise in the same session

*NASA Ocean Surface Topography Mission, Science Working Team Meeting, Nice, France, November 2008*

Beckley, B.D., N.P. Zelensky, F.G. Lemoine, R.D. Ray, S. Desai, S. Brown, **G.T. Mitchum** and S. Labroue, Extending the sea surface height climate data record with OSTM data.  
Nerem, R.S., D. Chambers, **G.T. Mitchum**, J. Ries, J. Choe and T. Sazonova, Building and understanding a climate record of sea level change.  
Lagerloef, G., F. Bonjean and **G.T. Mitchum**, Upper ocean dynamics related to the Pacific Decadal Oscillation using altimeter derived velocity fields.  
Lillibridge, J., R. Scharroo, E. Leuliette and **G.T. Mitchum**, Jason-2/OSTM near real-time product validation at NOAA.

**Calendar year 2007**

*University of Hawai'i at Manoa, March 2007*

Invited to give a seminar on Sea Level Rise in the Department of Oceanography.

*Ocean Surface Topography Science Team meeting, Hobart, Australia, March 2007*

**Mitchum, G.T.**, B. Beckley, N. Bernier, and K. Sedwick, Improved Comparisons of Altimeter Sea Surface Heights and Tide Gauge Sea Levels.  
Nerem, R.S., **G.T. Mitchum**, D.P. Chambers, J. Choe, and E. Leuliette, An Assessment of Jason GDR-Bs for Monitoring Long-term Sea Level Change.



Merrifield, M.A., **G.T. Mitchum**, B. Giese, S.T. Merrifield, J. Foster, B. Brooks, and M. Bevis, Global Sea Level Estimates from the GCOS Tide Gauge Network.

Lagerloef, G., F. Bonjean, J. Gunn, L. Miller, **G.T. Mitchum**, Surface Currents and Evolution of the 2006-2007 El Nino.

*NASA Workshop on Decadal Climate Variability, Kona, Hawaii, May 2007*

**Mitchum, G.T.**, and R. Steven Nerem, Decadal Variability and Sea Level Rise.

*AGU Joint Assembly, Acapulco, Mexico, May 2007*

**Mitchum, G.T.**, and N. Bernier (invited), Using Tide Gauges to Assure the Quality and Stability of Sea Surface Heights from Satellite Altimetry. (Note: Mitchum was the invited speaker and prepared the talk, but due a last minute schedule conflict with an NSF panel, Bernier attended and presented the talk in his place.)

*IOC GLOSS Group of Experts X, Paris, France, June 2007*

Invited as sea level expert and as Chair of GLOSS Science Steering Group.

*1<sup>st</sup> International Meeting of Students in Physical Oceanography, Ensenada, Mexico, June 2007*

Sedwick-Doran, K., and **G.T. Mitchum**, Improvements to the Method of Altimeter Calibration Using Tide Gauges: Addressing the Problem of Land Motion.

*College of Marine Science Brown Bag, September 2007*

**Mitchum, G.T.** (invited), Global Climate Change I: Is the Sky Really Falling and is it our Fault?

*Florida Environmental Summit, Jacksonville, Florida, November 2007*

**Mitchum, G.T.** (invited), A Review of the Science Underlying 20<sup>th</sup> Century Sea Level Rise Estimates.

## **Calendar year 2006**

*University of Texas at Austin, November 2006*

Invited to give two seminars. One on Sea Level Rise in the Institute for Geophysics and one on circulation controls on swordfish catch in the Center for Nonlinear Dynamics in the Physics department.

*World Climate Research Workshop on Global Sea Level Rise, Paris, France, June 2006*

Invited as convenor of the 20<sup>th</sup> Century Sea Level Rise session

**Mitchum, G.T.**, R.S. Nerem, and M. Merrifield (invited), Instrumental estimates of 20<sup>th</sup> Century Sea Level Rise. Nerem, R.S., E. Leuliette, **G.T. Mitchum**, D. Chambers, and J. Willis, Sea Level Change: What have we learned from satellite altimetry, satellite gravity, and ocean temperature measurements?

*European Geophysical Union General Assembly, Vienna, Austria, April 2006*

Bosch, W., C.K. Shum, P. Woodworth, and **G.T. Mitchum**, The International Altimetry Service (IAS) – Servicing Interdisciplinary Earth Science and Applications.

*Ocean Surface Topography Science Team meeting and 15 Years of Radar Altimetry Symposium, Venice, Italy, March 2006*

Bonjean, F., G. Lagerloef, **G.T. Mitchum**, L. Miller, R. Legeckis, N. Soreide, M. Bourassa, E. Johnson, and J.

Gunn, Ocean Surface Current Monitoring from Space: Methodology and Progress.

Bosch, W., C.K. Shum, P. Woodworth, and **G.T. Mitchum**, The International Altimetry Service (IAS) – Focusing Satellite Altimetry for Global Earth Observing Systems.

Nerem, R.S., D. Chambers, E. Leuliette, and G.T. Mitchum, Satellite Measurements of Sea Level Change: Where Have We Been and Where Are We Going.

*Ocean Sciences, Honolulu, Hawaii, February 2006*

**Mitchum, G.T.**, Consistent Sea Surface Height Time Series From Satellite Altimeters.

Bonjean, F., G. Lagerloef, **G.T. Mitchum**, L. Miller, R. Legeckis, N. Soreide, M. Bourassa, E. Johnson, and J. Gunn, Ocean Surface Current Monitoring from Space: Methodology and Applications.

## **Calendar year 2005**

*NASA Workshop on Decadal Climate Variability, Airlie, Virginia, October 2005*

**Mitchum, G.T.**, Errors in Sea Level Rise Estimates due to Decadal Variability.

*College of Marine Science, University of South Florida, September 2005*

**Mitchum, G.T.**, From the time of tide gauges to the age of altimetry.

*IAG/IAPSO/IABO Joint Assembly, Cairns, Australia, August 2005*

Invited as convener of the keynote session for this international meeting

**Mitchum, G.T.**, and R.S. Nerem (Invited), From the time of tide gauges to the age of altimetry: A review of the evolution of our knowledge of global sea level change.

Nerem, R.S., . Leuliette, D. Chambers, and **G. T. Mitchum** (Invited), The record of sea level change from geodesy: What does it tell us?

*ASAE Annual International Meeting, Tampa, Florida, July 2005*

**Mitchum, G.T.**, (Invited), Tsunami physics and tsunami warning: Two very different problems.

*NASA Sea Level Workshop, Washington, DC, April 2005*

Invited by the Physical Oceanography Program Manager to serve as one of three panelists to evaluate NASA's overall program in sea level rise research

**Mitchum, G.T.**, and M. Merrifield (Invited), Global tide gauge and observation system for global sea level change: Resolution/accuracy/error budgets.

*IOC GLOSS Group of Experts IX, Paris, France, February 2005*

Invited as sea level expert and as Chair of GLOSS Science Steering Group

**Mitchum, G.T.**, and K. Sedwick (Invited), Land motion results from GPS applied to altimeter calibration.

#### **Calendar year 2004**

*GODAE Symposium and NASA/CNES Ocean Surface Topography Science Team, St. Petersburg, Florida, November 2004*

**Mitchum, G.T.**, M. Merrifield, R. Ray and P. Woodworth, (Invited) From tides to sea level rise – The modern approach to reducing uncertainties: Dedicated to Christian Le Provost.

Sedwick, K., **G.T. Mitchum**, D. Morken and R.S. Nerem, Progress in altimeter calibration using the global tide gauge network.

Leuliette, E., R.S. Nerem and **G.T. Mitchum**, Jason tide gauge calibration results.

Bonjean, F., G. Lagerloef, E. Johnson, J. Gunn, **G.T. Mitchum** and R. Cheney, OSCAR-2: Ocean surface current analyses real-time follow-on project.

*AGU Western Pacific Geophysics Meeting, Honolulu, Hawaii, August 2004*

**Mitchum, G.T.**, J. Polovina, C. Holland and M. Seki, (Invited) Diagnosing swordfish catch variability using satellite altimetry.

*NASA Workshop on Decadal Climate Variability, Kona, Hawaii, February 2004*

Lagerloef, G., **G.T. Mitchum**, P. Cummins and J. Polovina, Oceanic and atmospheric evidence for abrupt North Pacific oceanographic changes after 1998. (Note: **Mitchum** presented the talk.)

*ASLO/TOS Ocean Research Conference, Honolulu, Hawaii, February 2004*

**Mitchum, G.T.**, J. Polovina and C. Holland, Interannual variability of swordfish catch North of Hawaii.

*AGU Ocean Sciences Meeting, Portland, Oregon, January 2004*

**Mitchum, G.T.**, R.S. Nerem, E. Leuliette and D. Chambers, Global sea level rise from satellite altimetry and tide gauges: Methods, Current results, Future prospects.

#### **Calendar year 2003**

*Fall AGU meeting, San Francisco, California, December 2003*

Leuliette, E., R.S. Nerem and **G.T. Mitchum**, Results of TOPEX/Poseidon calibration and recent changes in the global mean sea level.

*JASON-1 Science Working Team, Arles, France, November 2003*

R.S. Nerem, **G.T. Mitchum** and E. Leuliette, (Invited) Tide gauge calibration results for Jason-1 and the implications for measuring global mean sea level.  
Holland, C., and **G.T. Mitchum**, Interannual heat content variability and Lagrangian pathways in the tropical Pacific.  
Law, J., and **G.T. Mitchum**, Deep ocean effects on outer continental shelf flow: A descriptive study in the Loop Current, Florida Current and Gulf Stream systems.  
Bonjean, F., G. Lagerloef, R. Cheney, **G.T. Mitchum**, M. Bourassa, OSCAR: Processing system and applications.  
Lagerloef, G., P. Cummins, **G.T. Mitchum** and J. Polovina, Oceanic and Atmospheric evidence for abrupt North Pacific oceanographic changes after 1998.  
Nerem, R.S., E. Leuliette, **G.T. Mitchum** and D. Chambers, A continuous record of long-term sea level change from TOPEX/Poseidon and Jason.

*IOC GLOSS Group of Experts VII, Paris, France, October 2003*

Invited as sea level expert and as Chair of GLOSS Science Steering Group  
**Mitchum, G.T.**, (Invited) Requirements for the sea level observing system for satellite altimeter calibration.

*IUGG 2003, Sapporo, Japan, July 2003*

Lagerloef, G., P. Cummins, J. Polovina, and **G.T. Mitchum**, Oceanic and Atmospheric Evidence for a Pacific Decadal Oscillation Phase Shift After 1998.  
Lagerloef, G., R. Lukas, F. Bonjean, J. Gunn, **G.T. Mitchum**, and M. Bourassa, El Nino Tropical Pacific Ocean Surface Current and Temperature Evolution in 2002 and Outlook for La Nina in early 2003.

*IGARS '03, Toulouse, France, July 2003*

**Mitchum, G.T.**, E. Leuliette and R.S. Nerem, (Invited) Global Mean Sea Level Change from Altimetry. (Note: Talk presented by Leuliette due to Mitchum family emergency)

*Intergovernmental Oceanographic Commission (UNESCO) Assembly, Paris, France, June 2003*

Woodworth, P., **G.T. Mitchum** and T. Aarup, GLOSS: Global Sea Level Observing System.

*J.J. O'Brien "40 Years of Research" Symposium, Tallahassee, Florida, April 2003*

**Mitchum, G.T.**, and C. Holland, (Invited) The role of volume variations in ENSO events.

**Calendar year 2002**

*Fall AGU meeting, San Francisco, California, December 2002*

**Mitchum, G.T.**, and C. Vonesch, Low frequency Modulations in the Response of Coastal Sea Level to Winter Storms.  
Holland, C., and **G.T. Mitchum**, Interannual Volume Changes and Heat Transport Pathways in the Tropical Pacific.  
Lagerloef, G., **G.T. Mitchum**, F. Bonjean, and R. Cheney, OSCAR (Ocean Surface Currents Analysis - Real time): An Operational Resource for Various Maritime Applications and El Nino Monitoring Using JASON-1 Data.  
Leuliette, E., R.S. Nerem, J. Parker, **G.T. Mitchum**, and D. Chambers, Results of TOPEX/Poseidon-JASON Calibration to Construct a Continuous Record of Global Mean Sea Level.

*Bathymetry from satellite altimetry planning meeting, San Diego, California, October 2002*

Invited as an expert in satellite altimetry.

*TOPEX/Poseidon/JASON-1 Science Working Team meeting, New Orleans, Louisiana, October 2002*

**Mitchum, G.T.**, (Invited) Updated JASON-1 stability estimates from global tide gauge measurements.  
Holland, C., and **G.T. Mitchum**, Lagrangian Analyses of Interannual Volume Changes in the Tropical Pacific  
Lagerloef, G., **G.T. Mitchum**, R. Cheney, L. Miller, M. Bourassa, F. Bonjean, J. Gunn, E. Johnson, N. Soreide, W. Zhu, R. Legeckis, V. Kousky, Y. Zue, J. Polovina, and G. Jacobs, OSCAR (Ocean Surface Current Analysis Real time): A Processing System and Web-server using JASON IGDR Data to Provide Timely Surface Velocity Fields in the Tropical Pacific.

*NASA Workshop on Decadal Variability, Madison, Wisconsin, October 2002*

**Mitchum, G.T.**, and C. Vonesch, Low frequency modulations in winter storm frequency from tide gauge measurements of sea level.

*GPS workshop, Toulouse, France, September 2002*

Invited as an expert in altimetry and GPS and to serve as a session chair.

*JASON-1 Science Working Team meeting, Toulouse, France, May 2002*

**Mitchum, G.T.**, (Invited) JASON Stability and Precision Estimates from the Global Tide Gauge Network.

*EGS 2002, Nice, France, April 2002*

Nerem, R.S., E. Leuliette, **G.T. Mitchum**, D. Chambers, Comparison of Long-term Sea Level Change Estimates from Satellite Altimetry and Tide Gauges.

*Ocean Sciences meeting, Honolulu, Hawaii, February 2002*

Lagerloef, G., R. Lukas, F. Bonjean, and **G.T. Mitchum**, The El Nino Onset of 2001 – Or Not: Analysis of Tropical Pacific Surface Current and SST Variations during the Past Year.

## **Calendar year 2001**

*Fall AGU meeting, San Francisco, California, December 2001*

Lagerloef, G., R. Cheney, **G.T. Mitchum**, Establishing an Operational Data System for Surface Currents Derived from Satellite Altimeters and Scatterometers: Pilot Study for the Tropical Pacific.

*JASON-1 Science Working Team, Solvang, California, December 2001*

**Mitchum, G.T.**, (invited) Sea Level Rise

*Global Sea Level Observing System (GLOSS) Group of Experts and 3 related workshops, Honolulu, Hawaii, April 2001*

Nerem, S., and **G.T. Mitchum**, (invited) Observations of sea level change using satellite altimetry  
Co-convenor of the Wyrski Symposium (with M. Merrifield and R. Lukas)

*NASA Workshop on Decadal Variability, Honolulu, Hawaii, January 2001*

**Mitchum, G.T.**, The future of the sea level observing system

## **Calendar year 2000**

*Fall AGU meeting, San Francisco, California, December 2000*

Nerem, S., E. Leuliette, D. Chambers, and **G.T. Mitchum** (invited), Observations of sea level change using satellites

*TOPEX/Poseidon/JASON-1 Science Working Team meeting, Miami, Florida, November 2000*

**Mitchum, G.T.**, (invited) An update on monitoring the stability of satellite altimeters with tide gauge data

**Mitchum, G.T.**, D. Hancock, G. Hayne, and D. Vandemark, (invited) Description of sigma-naught blooms in TOPEX altimeter data

**Mitchum, G.T.**, A. Busalacchi, and G. Lagerloef, Studies of tropical variability

**Mitchum, G.T.**, and R. Scharroo, Intercomparison of TOPEX and ERS and tide gauge sea levels

Lagerloef, G., **G.T. Mitchum**, A. Busalacchi, and J. Gunn, Tropical surface currents estimated from satellite altimeter sea levels and winds

Gilbert, S., and **G.T. Mitchum**, Can TOPEX/Poseidon observe equatorial inertia-gravity waves?

Nerem, S., and **G.T. Mitchum**, Studies of vertical crustal motion and sea level using TOPEX/Poseidon

*Department of Geology, University of South Florida, Invited seminar speaker on 17 April 2000*

**Mitchum, G.T.**, How much is sea level rising?

*Ocean Sciences 2000, San Antonio, Texas, January 2000*

**Mitchum, G.T.**, Combining data from satellite altimetry and tide gauges for studies of low frequency sea surface height variations

G. Lagerloef, **G.T. Mitchum**, and P. Niiler, Altimeter-derived surface geostrophic currents apparently underestimated relative to surface drifters

J. Gunn, G. Lagerloef, **G.T. Mitchum**, and A. Busalacchi, Towards a real-time tropical surface current analysis

## **Calendar year 1999**

*Physics Department, University of South Florida, Invited seminar speaker on 15 November 1999*

**Mitchum, G.T.**, Will sea level rise?

*OCEANOBS 99, The Observing System for Climate, St. Raphael, France, October, 1999*

**Mitchum, G.T.**, R. Cheney, L.-L. Fu, C. Le Provost, Y. Menard, and P. Woodworth (invited), The future of sea surface height observations

Garzoli, S., D. Enfield, G. Reverdin, **G.T. Mitchum**, R. Weisberg, P. Chang, and J. Carton (invited), COSTA: A climate observing system for the tropical Atlantic

G. Lagerloef, **G.T. Mitchum**, R. Lukas, P. Niiler, and A. Busalacchi, Tropical Pacific near surface currents estimated from altimeter, wind and drifter data

G. Lagerloef, **G.T. Mitchum**, A. Busalacchi, and F. Bonjean, Near-real-time satellite-derived tropical surface current variability as an aid to ENSO monitoring and prediction

*TPEM/JASON-1 Science Working Team meeting, St. Raphael, France, October 1999*

**G.T. Mitchum** and S. Nerem, Improved tide gauge calibration, TOPEX Side A to Side B offset, and the present status of the global sea level change estimate

C. Holland and **G.T. Mitchum**, Propagation of Big Island eddies

C. Holland and **G.T. Mitchum**, Decadal and ENSO variability and mass pathways in the Pacific

*National Research Council Workshop on Integration of IPO/NPOESS and NASA/ESE Capabilities for Climate Research, Washington, DC, July, 1999*

Invited as an expert on satellite altimetry, and helped to draft recommendations for workshop report

*Global Sea Level Observing System (GLOSS) Group of Experts, Toulouse, France, May, 1999*

Invited as a member of the Group of Experts to review the global sea level observing system, and served as overall convenor for a 2-day workshop at the beginning of the meeting concerned with applications of sea level data to climate research. Organized 30 talks and prepared an IOC workshop proceedings report after the meeting.

*TOPEX Alt-B Cal/Val Meeting #1, Goddard Space Flight Center, April, 1999*

**G.T. Mitchum** (invited), Tide Gauge Comparison Potential for Alt-B Calibration

*Climate Observing System for the Tropical Atlantic (COSTA), Planning Workshop, Miami, May, 1999*

Invited as one of 4 session chairs and charged with writing the sea level portion of the plan.

**G.T. Mitchum** (invited), An overview of the Atlantic Sea Level Observing System

*American Meteorological Society Annual meeting, Dallas, January 1999*

**G.T. Mitchum** (invited), A System for Measuring Long-term Regional to Global Sea Level Change, talk was presented by C. Holland

## **Calendar year 1998**

*Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1998*

Lagerloef, **G.T. Mitchum**, R. Lukas and A. Busalacchi, Tropical Pacific Surface Currents During the 1997-1998 El Nino-Southern Oscillation cycle

S. Nerem, E. Leuliette, D. Chambers and **G.T. Mitchum** (invited), Variations in Global Mean Sea Level During the 1997-1998 ENSO event

*INSMAP, Melbourne, December 1998*

**G.T. Mitchum** (invited), On Calibrating Satellite Altimeters with Tide Gauges and GPS

*TPEM/JASON-1 Science Working Team meeting, Boulder, October 1998*

**G.T. Mitchum** (invited), Improvements to the Estimates of Altimeter Drift from Tide Gauges

**G.T. Mitchum**, A. Busalacchi and G. Lagerloef, Mean Surfaces for Altimetric Data : Beyond Representativeness

G. Lagerloef, **G.T. Mitchum** and A. Busalacchi, Pacific Surface Currents

*International Association of Geodesy, International Symposium, Munich, October 1998*

R.S. Nerem, R.J. Eanes, J.C. Ries, and **G.T. Mitchum** (invited), The Use of a Precise Reference Frame in Sea Level Change Studies

*NASA Workshop on Interannual to Decadal Climate Variability, Williamsburg, September 1998*

**G.T. Mitchum** (invited), Can We Compute Decadal Anomalies from Decade-long Altimetric Time Series?

*World Ocean Circulation Meeting, Halifax, Nova Scotia, Canada, May 1998*

**G.T. Mitchum**, Joint Use of the WOCE "Fast Delivery" Tide Gauges and Satellite Altimeters

T.M.S. Johnston, M.A. Merrifield, and **G.T. Mitchum**, Interannual Sea Level and Geostrophic Current Anomalies in the Western Tropical Pacific

G.S.E. Lagerloef, **G.T. Mitchum**, and A.J. Busalacchi, Tropical Pacific Circulation Studies

*Spring meeting of the American Geophysical Union, Baltimore, April, 1998*

N. Schmidt, M. Haines, M.E. Luther, and **G.T. Mitchum**, Analyses of ENSO-related Trends in Precipitation in Florida

*Ocean Sciences, San Diego, CA, February, 1998*

G.S.E. Lagerloef and **G.T. Mitchum**, Tropical Pacific Currents

**G.T. Mitchum** and J.J. Polovina, Diagnosis of the Variability of Swordfish Catch North of Hawaii

M.P. Seki, D.R. Kobayashi, J.J. Polovina and **G.T. Mitchum**, Use of Near Real-time TOPEX altimetry to guide fisheries oceanography field studies in the central North Pacific

## **Calendar year 1997**

*Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1997*

**G.T. Mitchum** and C. Holland (invited), Sea Level from Tide Gauges

*Combined meeting of the TOPEX/Poseidon Science Working Team and an International Symposium entitled Monitoring the Oceans in the 2000s: An Integrated Approach, Biarritz, France, October, 1997*

Member of the TOPEX/Poseidon Science Working Team

**G.T. Mitchum** (invited) TOPEX Stability Evaluated by Tide Gauges : An Improved Determination and Prospects for Future Improvements

**G.T. Mitchum**, A. Busalacchi and G. Lagerloef, Studies of Tropical Pacific Variability

**G.T. Mitchum** and M. Merrifield, Using Altimetry to Calibrate In Situ Indices of Tropical Pacific Currents

**G.T. Mitchum**, A. Busalacchi and G. Lagerloef, Use of In Situ Sea Level and Models to Produce an Improved Altimetric Reference Surface for the Tropical Pacific

Holland, C., and **G.T. Mitchum**, Dynamics of Big Island Eddies

Nerem, S., and **G.T. Mitchum**, Combined Use of Tide Gauges and Satellite Altimetry

Lagerloef, G., **G.T. Mitchum** and A. Busalacchi, Tropical Pacific Surface Circulation

Polovina, J., D. Kobayashi, M. Seki and **G.T. Mitchum**, Application of Altimeter-derived Surface Currents to Fisheries Research and Management

*International Sea Level Workshop, Honolulu, HI, June, 1997*

Served as a member of the Science Steering Group for the workshop.

**G.T. Mitchum** (invited), Altimeter Calibration

*Methods for Monitoring Sea Level: GPS and Tide Gauge Benchmark Monitoring, GPS Altimeter Calibration, Pasadena, CA, March, 1997*

Chair of Session 2 -- An Introduction to the Measurements

**G.T. Mitchum** (invited), An Overview of Tide Gauge Measurements

**G.T. Mitchum** (invited), Using Tide Gauges to Calibrate Satellite Altimeter Measurements

*Global Sea Level Observing System (GLOSS) Group of Experts, Pasadena, CA, March, 1997*

Invited as a member of the Group of Experts to review the global sea level observing system, and to assist in the revision of the IOC's Global Sea Level Observing System Implementation Plan.

*Microgal Gravimetry: Instruments, Observations, and Applications, St. Augustine, FL, March, 1997*

Invited by conference organizer (W. Carter, UF) to attend because of experience with sea level issues.

## **Calendar year 1996**

*Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1996*

- C. Holland and **G.T. Mitchum**, The Fate of Eddies Generated off the Big Island of Hawaii
- S. Nerem and **G.T. Mitchum** (invited), Very Low Frequency Sea Level Change Observed by TOPEX/POSEIDON
- R. Ray and **G.T. Mitchum** (invited), Surface Manifestation of Internal Tides in the Deep Ocean
- S. Nerem and **G.T. Mitchum**, Combined Use of Tide Gauges and Satellite Altimetry for Measuring Changes in Global Mean Sea Level

*TOPEX/Poseidon Science Working Team Meeting, Southampton, UK, October, 1996*

- G.T. Mitchum** (invited), Estimating the stability of altimeters from tide gauge sea levels
- G. Lagerloef, **G.T. Mitchum**, R. Lukas, A. Busalacchi and P. Niiler, Tropical Pacific near Surface Currents Estimated from Altimeter, Wind and Drifter Data

*Tidal Science 96, London, England, UK, October, 1996*

- R. Ray, **G.T. Mitchum** and S. Chiswell (invited), Two aspects of observed internal tides in the deep ocean: altimetry vs island gauges

## **Community Service**

Interview for State of Texas PBS on Sea Level Rise (March 2010)

Quoted in *Sarasota Magazine* article on Sea Level Rise (February 2010)

Live television interview on possible tsunami event in Gulf of Mexico (St. Petersburg, FL, September, 2006)

Taped television interview on possible tsunami event in Gulf of Mexico (St. Petersburg, FL, September 2006)

Invited talk in Sierra Club Workshop for Educators on Global Climate Change (Sarasota, FL, March 1999)

Two broadcasts on satellite remote sensing for Project Oceanography at USF (1998)

Hawaii State Selection Committee, National Science Scholars Program, Member (1991-1995)

Hawaiian Academy of Science: General Secretary (1989-1990), Exec. Council (1991-1995), President (1993-1994)

Lectures and advising for Hawaii Civil Defense on climate change and severe weather frequency (1994-1995)