

PUBLICATIONS

Books and monographs published:

- Graber, H.C.**, 1984: A Parametric Wind-Wave Model for Waters of Arbitrary Depth, Sc.D. Thesis, Massachusetts Institute of Technology, Cambridge, MA, 310 pp.
- Graber, H.C.** and K.A. Kelly: PRINCIPLES AND PHYSICS OF REMOTE SENSING IN OCEANOGRAPHY. Course Notes. WHOI/MIT.
- Graber, H.C.** and O.S. Madsen, 1985: A Parametric Wind-Wave Model for Waters of Arbitrary Depth, In: The Ocean Surface, Eds: Y. Toba & H. Mitsuyasu, D. Reidel Publishing Co., 193-199. (refereed).
- Graber, H.C.**, V. Cardone, R. Jensen, S. Hasselmann, H.L. Tolman and L. Cavalieri, 1994: The accuracy of wind field description. In: Komen et al., Dynamics and Modelling of Ocean Waves. Cambridge University Press, 285-293. (refereed).
- Tolman, H.L., S.H. Hasselmann, **H.C. Graber**, R.E. Jensen, and L. Cavalieri, 1994: Application to the open ocean. In: Komen et al., Dynamics and Modelling of Ocean Waves. Cambridge University Press, 355-359. (refereed).
- Hasselmann, S., K. Hasselmann, C. Brüning, R.B. Long, **H.C. Graber**, E. Bauer, and B. Hansen, 1994: I.4 Measurements of Waves and Winds. In: Komen et al., Dynamics and Modelling of Ocean Waves. Cambridge University Press, 60-68. (refereed).
- Graber, H.C.** and J. Paduan, (Eds.), 2003: Radiowave Oceanography. First International Workshop, University of Miami, 152 pp.
- Walker, N.D., C.T. Pilley, V.V. Raghunathan, E.J. D'Sa, R.R. Leben, N.G. Hoffmann, P.J. Brickley, P.D. Coholan, N. Sharma, **H.C. Graber**, R.E. Turner, 2011: Impacts of Loop Current Frontal Cyclonic Eddies and Wind Forcing on the 2010 Gulf of Mexico Oil Spill. *Geophys. Monogr. Ser.*, Vol. 195, edited by Y. Liu et al., p. vii, AGU, Washington, D. C., AGU Monograph: *Monitoring and Modeling the Deepwater Horizon Oil Spill: A Record Breaking Enterprise*, Vol. 195, pp. 103-116. doi:10.1029/2011GM001146. (refereed).

Juried or refereed journal articles and exhibitions: Total 112 publications

1988 (1):

- Graber, H.C.** and O.S. Madsen, 1988: A Finite Depth Wind Wave Model; Part I - Model Description. *J. Phys. Oceanogr.*, **18**, 1465-1482.

1989 (1):

- Graber, H.C.**, R.C. Beardsley and W.D. Grant, 1989: Storm-Generated Surface Waves and Sediment Resuspension in the East China and Yellow Seas. *J. Phys. Oceanogr.*, **19**, 1039-1059.

1990 (2):

- Signell, R.P., R.C. Beardsley, **H.C. Graber** and A. Capotondi, 1990: Effect of Wave-Current Interaction on Wind-Driven Circulation in Narrow, Shallow Embayments. *J. Geophys. Res.*, **95**, 9671-9678.

- Graber, H.C.**, M.W. Byman and W. Rosenthal, 1990: Numerical Simulation of Surface Wave Refraction in the North Sea. Part 1: Kinematics. *Dt. Hydrogr. Z.*, **43**, 1-18.

1992 (4):

- Graber, H.C.**, M.W. Byman and H. Günther, 1992: Numerical Simulations of Surface Wave Refraction in the North Sea. Part 2: Dynamics *Dt. Hydrogr. Z.*, **44**, 1-15.

- Donelan, M.A., M. Skaffel, **H.C. Graber**, P. Liu, D. Schwab and S. Venkatesh, 1992: On the Growth Rate of Wind-Generated Waves. *Atmosphere-Ocean*, **30**(3), 457-478.

- Bauer, E., S. Hasselmann, K. Hasselmann and **H.C. Graber**, 1992: Validation and Assimilation of SEASAT Altimeter Wave Heights Using the WAM Wave Model. *J. Geophys. Res.*, **97**, 12,671-12,682.

Lynch, J.F., H.X. Wu, R. Pawlowicz, P. Worcester, R. Keenan, **H.C. Gruber**, P. Wadhams, O. Johannessen, R. Shuchman, 1992: Ambient Noise Measurements in the 200-300 Hz Band from the Greenland Sea Tomography Experiment. *J. Acoust. Soc. America*, **94**(2), Pt. 1, 1,015-1,033.

1994 (3):

- Anctil, F., M.A. Donelan, W.M. Drennan, and **H.C. Gruber**, 1994: Eddy Correlation measurements of air-sea fluxes from a discus buoy. *J. Atmos. Oceanic Techn.*, **11**(4), 1144-1150.
- Shay, L.K., P.C. Zhang, E.J. Walsh, and **H.C. Gruber**, 1994: Simulated surface wave-current interactions during SWADE. *Glo. Atmos. Ocean Sys.*, **5**, 125-150.
- Walsh, E.J., L.K. Shay, **H.C. Gruber**, A. Guillaume, D. Vandemark, D.E. Hines, R.N. Swift, and J.F. Scott, 1994: Observed surface wave-current interactions during SWADE. *Glo. Atmos. Ocean Sys.*, **5**, 99-124.

1995 (2):

- Shay, L.K., **H.C. Gruber**, D.B. Ross, R.D. Chapman, 1995: Mesoscale Ocean Surface Current Structure Detected by HF Radar: Data Quality. *J. Atmos. Oceanic Techn.*, **12**(4), 881-900.
- Cardone, V.J., **H.C. Gruber**, R.E. Jensen, S. Hasselmann, and M. Caruso, 1995: In Search of the true surface wind field in SWADE IOP-1: Ocean Wave modelling perspective. *Glo. Atmos. Ocean Sys.*, **3**(2-3), 107-150.

1996 (3):

- Gruber, H.C.**, D.R. Thompson, and R.E. Carande, 1996: Ocean Surface Features and Currents Measured with SAR Interferometry and HF Radar. *J. Geophys. Res.*, **101**(C11), 25,813-25,832.
- Limouzy-Paris, C.B., **H.C. Gruber**, D.L. Jones, A. Röpke, and W.J. Richards, 1996: Translocation of larval coral reef fishes via sub-mesoscale spin-off eddies from the Florida Current. *Bull. Mar. Sci.*, **60**, 966-983.
- Chin, D.A., S. Chinthamreddy, L.K. Shay and **H.C. Gruber**, 1996: The structure of ocean-surface currents measured by Doppler radar. *IEEE J. Oceanic Eng.*, **22**(1), 156-167.

1997 (13):

- Beal, R.C., V. Kudryavtsev, D.R. Thompson, S. Grodsky, D.G. Tilley, V. Dulov and **H.C. Gruber**, 1997: Interpretation of ERS-1 SAR imagery of the Gulf Stream using near-surface measurements. *J. Geophys. Res.*, **102**(C3), 5799-5814.
- Weissman, D.E., F.K. Li, S. Lou, S.V. Nghiem, G. Neumann, R.E. McIntosh, S.C. Carson, J.R. Carswell, **H.C. Gruber**, and R.E. Jensen, 1997: Measurements of Ocean Surface Stress Using Aircraft Scatterometers. *J. Atmos. Oceanic Techn.*, **14**(4), 835-848.
- Chapman, R.D., L.K. Shay, **H.C. Gruber**, J.B. Edson, A. Karachintsev, C.L. Trump and D.B. Ross, 1997: The accuracy of HF radar current measurements. *J. Geophys. Res.*, **102**(8), 18,737-18,748.
- Gruber, H.C.**, B.K. Haus, R.D. Chapman, and L.K. Shay, 1997: HF radar comparisons with moored estimates of current speed and direction: Expected differences and implications. *J. Geophys. Res.*, **102**(8), 18,749-18,766.
- Marmorino, G.O., D.R. Thompson, **H.C. Gruber** and C.L. Trump, 1997: Correlation of oceanographic signatures appearing in SAR and INSAR imagery with in-situ measurements. *J. Geophys. Res.*, **102**(8), 18,723-18,736.
- Ebuchi, N. and **H.C. Gruber**, 1997: Directivity of wind vectors derived from the ERS-1/AMI scatterometer. *J. Geophys. Res.*, **103**, 7,787-7,797.
- Shay, L.K., S.J. Lentz, **H.C. Gruber**, and B.K. Haus, 1997: Current structure variations detected by high frequency radar and vector measuring current meters. *J. Atmos. Oceanic Techn.*, **15**, 237-256.
- Paduan, J.D. and **H.C. Gruber**, 1997: Introduction to HF current radar: Reality and myth. *Oceanography*, **10**(2), 36-39.
- Haus, B.K., **H.C. Gruber** and L.K. Shay, 1997: Synoptic measurements of dynamic oceanic features. *Oceanography*, **10**(2), 45-48.
- Gruber, H.C.** and C.B. Limouzy-Paris, 1997: Transport patterns of tropical reef fish larvae by spin-off eddies in the Straits of Florida. *Oceanography*, **10**(2), 68-71.

Chapman, R.D. and **H.C. Gruber**, 1997: Validation of HF radar measurements. *Oceanography*, **10**(2), 76-79.

Gruber, H.C. and M.L. Heron, 1997: Wave height measurements from HF radar. *Oceanography*, **10**(2), 90-92.

Fernandez, D.M., **H.C. Gruber**, J.D. Paduan and D.E. Barrick, 1997: Mapping wind direction from HF radar. *Oceanography*, **10**(2), 93-94.

1998 (1):

Shay, L.K., T.N. Lee, E.J. Williams, **H.C. Gruber**, and C.G.H. Rooth, 1998: Effects of low-frequency current variability on near-inertial submesoscale vortices. *J. Geophys. Res.*, **103**, 18,691-18,714.

1999 (3):

Drennan, W.M., **H.C. Gruber** and M.A. Donelan, 1999: Evidence for the effects of swell and unsteady winds on marine wind stress. *J. Phys. Oceanogr.* **29**, 1853-1864.

Peng, G., C.N.K. Mooers and **H.C. Gruber**, 1999: Coastal winds in South Florida. *J. Appl. Meteorol.*, **38**, 1740-1757.

Weisman, D.E. and **H.C. Gruber**, 1999: Satellite scatterometer studies of ocean surface stress and drag coefficients using a direct model. *J. Geophys. Res.*, **104**, 11,329-11,335.

2000 (1):

Gruber, H.C., E.A. Terray, M.A. Donelan, W.M. Drennan, J.C. Van Leer, and D.B. Peters, 2000: ASIS – a new air-sea interaction spar buoy: Design and performance at sea. *J. Atmos. Oceanic Technol.*, **17**, 708-720.

2001 (1):

Shay, L.K., T.M. Cook, Z.R. Hallock, B. K. Haus, **H.C. Gruber**, and J. Martinez, 2001: The strength of the M_2 tide at the Chesapeake Bay mouth. *J. Phys. Oceanogr.* **31**, 427-449.

2002 (1):

Ebuchi, N., **H.C. Gruber**, and M.J. Caruso, 2002: Evaluation of wind vectors observed by QuickSCAT/SeaWinds using ocean buoy data. *J. Atmos. Oceanic Technol.*, **19**, 2049-2062.

2003 (9):

Drennan, W.M., **H.C. Gruber**, D. Hauser and C. Quentin, 2003: On the wave age dependence of wind stress over pure wind seas. *J Geophys. Res.* **108**(C3), 8062.

Pedreros R., Dardier, H. Dupuis, **H.C. Gruber**, W. Drennan, A. Weill, C. Guerin, and P. Nacass, 2003: Momentum and heat fluxes by eddy correlation method on R/V L'Atalante and ASIS buoy during the FETCH experiment. *J. Geophys. Res.*, **108**(C11), 3339.

Dupuis, H., C. Guerin, D. Hauser, A. Weill, P. Nacass, W. Drennan, S. Cloché and **H.C. Gruber**, 2003: Impact of flow distortion corrections on turbulent fluxes estimated by the inertial dissipation method during the FETCH experiment on R/V L'Atalante, *J. Geophys. Res.* **108**(C3), 8064.

Pettersson, H., **H.C. Gruber**, D. Hauser, C. Quentin, K.K. Kahma, W.M. Drennan, and M.A. Donelan, 2003: Directional wave measurements from three wave sensors during the FETCH experiment, *J. Geophys. Res.* **108**(C3), 8061.

Hauser D., H. Branger, S. Bouffies-Cloché, S. Despiau, W. Drennan, H. Dupuis, P. Durand, X. Durrieu de Madron, C. Estournel, L. Eymard, C. Flamant, **H.C. Gruber**, C. Guérin, K. Kahma, G. Lachaud, J-M. Lefèvre, J. Pelon, H. Pettersson, B. Piguet, P. Queffeulou, D. Tailliez, J. Tournadre and A. Weill, 2003: The FETCH experiment: an overview, *J. Geophys. Res.*, **108**(C3), 8053.

Drennan, W.M., K.K. Kahma, **H.C. Gruber**, Pettersson H., M.A. Donelan, and D. Hauser, 2003: ASIS-Directional waverider comparison. In: Measuring and Analysing the directional spectrum of ocean waves, (Eds: COST714 WG3) (pub: European Commission).

Gruber, H.C., M.A. Donelan and W.M. Drennan, 2003: ASIS - The Air-Sea Interaction Spar Buoy. In: Measuring and Analyzing the directional spectrum of ocean waves, (Eds: COST714 WG3) (pub: European Commission)

Haus, B.K., **H.C. Gruber**, L.K. Shay and T.M. Cook, 2003: Alongshelf Variability of a Coastal Buoyancy Current during the Relaxation of Downwelling Favorable Winds. *J. Coastal Res.*, **19**(2), 409-420.

Lane, P.V.Z., S.L. Smith, **H.C. Gruber** and G.L. Hitchcock, 2003: Mesoscale circulation and the surface distribution of copepods near south Florida Keys. *Bull. Mar. Sci.*, **72**, 1-18.

2004 (1):

Donelan, M.A., B.K. Haus, N. Reul, W.J. Plant, M. Stiassnie, **H.C. Gruber**, O.B. Brown, and E.S. Saltzman, 2004: On the limiting aerodynamic roughness of the ocean in very strong winds. *Geophys. Res. Letters*, **31**:18, L8306, doi: 10.1029/2004GL019460.

2005 (5):

Vandemark, D., B. Chapron, J. Sun, G. H. Crescenti, **H.C. Gruber**, 2005: Ocean Wave Slope Observations Using Radar Backscatter and Laser Altimeters. *J. Phys. Oceanogr.* **34**, 2825-2824

Gruber, H.C., 2005: The Shoaling Waves Experiment. *J. Atmos. Oceanic Technol.*, **22**, 797.

Donelan, M.A., F.W. Dobson, **H.C. Gruber**, N.K. Madsen and C. McCormick, 2005: Measurement of Wind Waves and Wave-Coherent Air Pressures on the Open Sea from a Moving Swath Vessel. *J. Atmos. Oceanic Technol.*, **22**(7), 893-905.

Wyatt, L., G. Liakhovetski, **H.C. Gruber** and B. Haus, 2005: Factors affecting the accuracy of Showex HF radar wave measurements. *J. Atmos. Oceanic Technol.*, **22**(7), 844-856.

Mahrt, L., D. Vickers, W.M. Drennan, **H.C. Gruber** and T.L. Crawford, 2005: Displacement measurement errors from moving platforms. *J. Atmos. Oceanic Technol.*, **22**(7), 857-865.

Horstmann, J., D.R. Thompson, F. Monaldo, S. Iris, and **H.C. Gruber**, 2005: Can synthetic aperture radars be used to estimate hurricane force winds? *Geophys. Res. Letters*, **32**(L22801), doi: 10.1029/2005GL023992.

2006 (3):

Haus, B. K., R. Ramos, **H.C. Gruber**, L. K. Shay and Z. R. Hallock, 2006: Remote Observation of the Spatial Variability of Surface Waves Interacting with an Estuarine Outflow. *IEEE J. Oceanic Engin.*, **31**(4), 1-15.

Gruber, H.C., V.J. Cardone, R. E. Jensen, D.N. Slinn, S.C. Hagen, A.T. Cox, M.D. Powell, and C. Grassl, 2006: Coastal Forecasts and Storm Surge Predictions for Tropical Cyclones. A Timely Partnership Program. *Oceanography*, **19**(1), 130-141.

Soloviev, A., M.A. Donelan, **H.C. Gruber**, B.K. Haus, and P. Schlüssel, 2006: Estimation of Near-Surface Turbulence and CO₂ Transfer Velocity from Remote Sensing Data, *J. Marine Sys.*, **66**, 182-194.

2007 (3):

Tang, D., J.N. Moum, J.F. Lynch, P. Abbot, R. Chapman, P.H. Dahl, T.F. Duda, G. Gawarkiewicz, S. Glenn, J.A. Goff, **H.C. Gruber**, J. Kemp, A. Maffei, J.D. Nash, and A. Newhall, 2007: Shallow Water '06: A Joint Acoustic Propagation/Nonlinear Internal Wave Physics Experiment, *Oceanography*, **20**(4), 156-167.

Bogden, P. S., T. Gale, G. Allen, J. McLaren, G. Almes, G. Creager, J. Bintz, L. D. Wright, **H.C. Gruber**, N. Williams, S. Graves, H. Conover, K. Galluppi, R. Luettich, W. Perrie, B. Toulany, Y. P. Sheng, J. R. Davis, H. Wang, D. Forrest, 2007: Architecture of a Community Infrastructure for Predicting and Analyzing Coastal Inundation, *Mar. Techno. Soc. J.*, **41**(1), 53-71.

Ardhuin F, T.H.C. Herbers, G.P. van Vledder, K.P. Watts, R. Jensen and **H.C. Gruber**, 2007: Swell and Slanting-Fetch Effects on Wind Wave Growth. *J. Phys. Oceanogr.*, **37**, 908-931.

2008 (2):

Dahl, P., J.W. Choi, N.J. Williams, and **H.C. Gruber**, 2008: Field Measurements and Modeling of Attenuation from Near-Surface Bubbles for Frequencies 1-20 kHz. *JASA Exp. Lett.*, *J. Acoust. Soc. Am.*, Vol. 124, No. 3, Pt. 2. EL 163 – EL 169.

Knobles, D.P., S.M. Joshi, R.D. Gaul, **H.C. Gruber**, and N.J. Williams, 2008: Analysis of wind-driven ambient noise in a shallow water environment with a sandy seabed. *JASA Exp. Lett.*, *J. Acoust. Soc. Am.*, Vol. 124, No. 3, Pt. 2. , EL 157 – EL 162.

2009 (4):

Ramos, R.J., **H.C. Gruber**, B.K. Haus, 2009: Observation of wave energy evolution in coastal areas using HF radar. *J. Atmos. Oceanic Techno.*, **26**, 1891-1909.

Zhang, F.W., W.M. Drennan, B.K. Haus and **H.C. Gruber**, 2009: On wind-wave-current

interactions during the Shoaling Waves Experiment. *J. Geophys. Res.*, **114**, C01018, (doi:10.1029/2008JC004998).

Gremes Cordero, S., B.K. Haus, **H.C. Gruber**, 2009: Surface signature of the Chesapeake Bay outflow variability observed with coastal radar. *J. Coastal Research*, **25**(6), 1254-1263.

Ramos, R.J., B. Lund, **H.C. Gruber**, 2009: Determination of internal wave properties from X-band radar observations. *Ocean Engineering*, **36** (14), 1039–1047.

2011 (3):

Gilman, M., A. Soloviev, **H.C. Gruber**, 2011: Study of the far wake of a large ship. *J. Atmos. Oceanic Techno.*, **28**(5), 720-733. (doi: 10.1175/2010JTECHO791.1)

Bruno, M., A. Sutin, K.W. Chung, A. Sedunov, N. Sedunov, H. Salloum, **H.C. Gruber**, P. Mallas, 2011: Satellite imaging and passive acoustics in layered approach for small boat detection and classification, *Mar. Techn. Soc. J.*, **45**(3), 1-11.

Ocampo-Torres, F.J., H. García-Nava, R. Durazo, P. Osuna, G.M. Diaz Méndez and **H.C. Gruber**, 2011: The intOA Experiment: a study of ocean-atmosphere interactions under moderate to strong offshore winds and opposing swell conditions in the Gulf of Tehuantepec, Mexico. *Bound.-Layer Meteor.*, **138**, 433–451. DOI 10.1007/s10546-010-9561-5.

2012 (3):

Gierach, M.M., **H.C. Gruber**, M.J. Caruso, 2012: SAR-derived gap jet characteristics in the lee of the Philippine Archipelago. *Rem. Sens. Environ.*, **117**, 289-300. (doi:10.1016/j.rse.2011.10.004)

Lund, B., **H.C. Gruber**, R. Romeiser, 2012: Wind retrieval from shipborne nautical X-band radar data. *IEEE Trans. Geosci. Rem. Sens.*, **50**(10), 3800-3811.

Walker, N., C. Pilley, E. D'Sa, R. Leben, P. Coholan, P. Brickley, and **H.C. Gruber**, 2012: Loop Current eddy merger exposed by satellites during Gulf of Mexico oil spill. *SPIE*, doi:10.1117/2.1201208.004439

2013 (8):

Duda, T.F., A.E. Newhall, G. Gawarkiewicz, M.J. Caruso, **H.C. Gruber**, Y.-J. Yang, J. Sen, 2013: Measured significant internal waves and internal tides northeast of Taiwan. *J. Mar. Res. (Special Issue)*, **71**(1-2), 47-81.

Lund, B., **H.C. Gruber**, J. Xue, and R. Romeiser, 2013: Analysis of internal wave signatures in marine radar data. *IEEE Trans. Geosci. Remote Sens.*, **51**(9), 4840-4852.

Romeiser, R., J. Horstmann, M.J. Caruso, and **H.C. Gruber**, 2013: A descalloping post-processor for ScanSAR images of ocean scenes. *IEEE Trans. Geosci. Remote Sens.*, **51**, 3259-3272.

Xue, J., **H.C. Gruber**, B. Lund, and R. Romeiser, 2013: Amplitudes estimation of large internal solitary waves in the Mid-Atlantic Bight using synthetic aperture radar and marine x-band radar images. *IEEE Trans. Geosci. Remote Sens.*, **51**, 3250-3258.

Xue, J., **H.C. Gruber**, R. Romeiser and B. Lund, 2013: Understanding internal wave-wave interaction patterns observed in satellite images of the Mid-Atlantic Bight *IEEE Trans. Geosci. Remote Sens.*, **52**(6), 3211-3219.

Caruso, M.J., M. Migliaccio, J. Hargrove, O. Garcia-Pineda, **H.C. Gruber**, 2013: Oil spills and slicks imaged by SAR. *Oceanography*. **26**(2), 112–123. <http://dx.doi.org/10.5670/oceanog.2013.34>

Mallas, P.A. and **H.C. Gruber**, 2013: Imaging ships from satellites. *Oceanography*. **26**(2), 150-155. <http://dx.doi.org/10.5670/oceanog.2013.71>

Muller-Karger, F., M. Roffer, N. Walker, M. Oliver, O. Schofield, M. Abbott, **H. Gruber**, R. Leben, G. Goni, 2013: Satellite Remote Sensing in Support of an Integrated Ocean Observing System. *IEEE Geosci. Rem. Sens. Mag.*, **1**(4), 8-18.

2014 (8):

Romeiser, R., **H.C. Gruber**, M.J. Caruso, R.E. Jensen, D.T. Walker, A.T. Cox, 2014: A New Approach to Ocean Wave Parameter Estimates from C-Band ScanSAR Images. *IEEE Trans. Geosci. Remote Sens.*, **53**(3), 1320 – 1345.

Collins III, C.O., B. Lund, R. Ramos, W.M. Drennan, **H.C. Gruber**, 2014: Wave Measurement Intercomparison and Platform Evaluation during the ITOP (2010) Experiment. *J. Atmos. Oceanic Technol.*, **31**, 2309–2329., doi: <http://dx.doi.org/10.1175/JTECH-D-13-00149.1>

Collins, C.O., B. Lund, T. Waseda, and **H.C. Gruber**, 2014: On recording sea surface elevation with accelerometer buoys: lessons from ITOP (2010). *Ocean Dynam.*, **64**(6), 895–904.

Lund, B., C.O. Collins, **H.C. Gruber**, E. Terrill, and T.H.C. Herbers, 2014: Marine radar ocean wave retrieval's dependency on range and azimuth. *Ocean Dynam.*, **64**(7), 999–1018.

Potter, H., C.O. Collins III, R.J. Ramos, N.J. Williams, W.M. Drennan, **H.C. Gruber**, 2014: In situ measurements of momentum fluxes in typhoons. *J. Atmos. Sci.*, **72**(1), 104–118. doi: [10.1175/JAS-D-14-0025.1](http://dx.doi.org/10.1175/JAS-D-14-0025.1)

D'Asaro, E.A., P.G. Black, L.R. Centurioni, Y.-T. Chang, S.S. Chen, R. Foster, **H.C. Gruber**, P. Harr, V. Hormann, R.-C. Lien, I.-I. Lin, T.B. Sanford, T.-Y. Tang, and C.-C. Wu, 2014: Impact of typhoons on the ocean in the pacific: ITOP. *Bull. Americ. Meteo. Soc.*, **95**(9), 1405–1418. doi: <http://dx.doi.org/10.1175/BAMS-D-12-00104.1>

Drennan, W.M., **H.C. Gruber**, C.O. Collins III, A. Herrera, H. Potter, R.J. Ramos, and N.J. Williams, 2014: EASI: An air-sea interaction buoy for high winds. *J. Atmos. Oceanic Technol.*, **31**, 1397–1409. DOI: 10.1175/JTECH-D-13-00201.1

Tamura, H., W.M. Drennan, E. Sahlee, **H.C. Gruber**, 2014: Spectral form and source balance of short gravity waves. *J. Geophys. Res.*, **119**, 7406–7419, doi:10.1002/2014JC009869.

2015 (8):

Ortiz-Suslow, D.G., B.K. Haus, N.J. Williams, N.M. Laxague, A.J.H.M. Reniers, and **H.C. Gruber**, 2015: The spatial-temporal variability of air-sea momentum fluxes observed at a tidal inlet. *J. Geophys. Res. Oceans*, **120**, 660–676, doi:10.1002/2014JC010412.

Alford, M.H., T. Peacock, M.C. Buijsman, L.R. Centurioni, S.-Y. Chao, M-H. Chang, D.M. Farmer, O.B. Fringer, K.-H. Fu, P. Gallacher, **H.C. Gruber**, K.R. Helfrich, S. Jachec, C. Jackson, J.M. Klymak, D.S. Ko, S. Jan, T.M.S. Johnston, S. Legg, I-H. Lee, R.-C. Lien, J.A. MacKinnon, M.J. Mercier, J.N. Moum, R. Musgrave, J.D. Nash, T. Paluszakiewicz, J-H. Park, A.I. Pickering, R. Pinkel, L.R. Rainville, S. Ramp, D.R. Rudnick, S. Sarkar, A. Scotti, H.L. Simmons, L.C. St. Laurent, K. Venayagamoorthy, Y.-H. Wang, Y.J. Yang, T.Y. Tang, 2015: The formation and fate of internal waves in the South China Sea. *Nature*, **521**, 65–69. doi:10.1038/nature14399.

Lund, B., **H.C. Gruber**, K. Hessner, and N.J. Williams, 2015: On shipboard marine X-band radar near-surface current “calibration”. *J. Atmos. Oceanic Technol.*, **32**(10), 1928–1944. DOI: 10.1175/JTECH-D-14-00175.1

Horstmann, J., S. Falchetti, C. Wackerman, S. Maresca, M. Caruso and **H.C. Gruber**, 2015: High resolution tropical cyclone winds retrieved from satellite-borne C-band cross polarized synthetic aperture radar. *IEEE Trans. Geosci. Remote Sens.*, **53**(5), 2887–2898. DOI: 10.1109/TGRS.2014.2366433

Romeiser, R., and **H.C. Gruber**, 2015: Advanced remote sensing of internal waves by spaceborne along-track InSAR— A demonstration with TerraSAR-X. *IEEE Trans. Geosci. Remote Sens.*, **53**(12), 6735–6751, doi:10.1109/TGRS.2015.2447547.

Collins, C., C.L. Vincent, and **H.C. Gruber**, 2015: A Statistical Method for Correlating Paired Wave Spectra. *J. Atmos. Oceanic Technol.*, **32**, 2130–2146. doi: 10.1175/JTECH-D-15-0040.1

Potter, H., C.O. Collins III, W.M. Drennan, **H.C. Gruber**, 2015: Observations of wind stress direction during Typhoon Chaba (2010). *Geophys. Res. Lett.* **42**(22), 9898–9905. doi: 10.1002/2015GL065173

Lund, B., **H.C. Gruber**, H. Tamura, C.O. Collins III, and S.M. Varlamov, 2015: A new technique for the retrieval of near-surface vertical current shear from marine X-band radar images. *J. Geophys. Res. Oceans*, **120**(12), 8466–8486. doi: 10.1002/2015JC010961

2016 (6):

Park, J-W., H.-C. Kim, S.-H. Hong, S.-H. Kang, **H.C. Gruber**, B. Hwang and C.M. Lee, 2016: Radar backscattering changes in Arctic sea ice from late summer to early autumn observed by

space-borne X-band HH-polarization SAR. *Rem. Sens. Lett.*, **7**(6), 551–560. doi: 10.1080/2150704X.2016.116581

Lund, B., C.O. Collins III, H. Tamura, **H.C. Gruber**, 2016: Multi-Directional Wave Spectra from Marine X-band Radar. *Ocean Dynam.*, **66**, 973–988. doi: 10.1007/s10236-016-0961-z

Huguenard, K.D., D.J. Bogucki, D.G. Ortiz-Suslow, N.J.M. Laxague, J.H. MacMahan, T.M. Özgökmen, B.K. Haus, A.J.H. M. Reniers, J. Hargrove, A.V. Soloviev, **H.C. Gruber**, 2016: On the nature of the frontal zone of the Choctawhatchee Bay plume in the Gulf of Mexico. *J. Geophys. Res. Oceans*, **121**, 1322–1345, doi:10.1002/2015JC010988. Special Section: *Physical Processes Responsible for Material Transport in the Gulf of Mexico for Oil Spill Applications*.

Zhang, J., H. Stern, B. Hwang, A. Schweiger, M. Steele, M. Stark, and **H.C. Gruber**, 2016: Modeling the seasonal evolution of the Arctic sea ice floe size distribution. *Elementa: Science of the Anthropocene*, **4**:000126, 1-19. doi: 10.12952/journal.elementa.000126

Thomson, J., Y. Fan, S. Stammerjohn, J. Stopa, W.E. Rogers, F. Girard-Ardhuin, F. Ardhuin, H. Shen, W. Perrie, H. Shen, S. Ackley, A. Babanin, Q. Liu, P. Guest, T. Maksym, P. Wadhams, C. Fairall, O. Persson, M. Doble, **H.C. Gruber**, B. Lund, V. Squire, J. Gemmrich, S. Lehner, B. Holt, M. Meylan, J. Brozena, and J.-R. Bidlot, 2016: Emerging trends in the sea state of the Beaufort and Chukchi Seas. *Ocean Modelling*, **105**, 1–12.

Laxague, N.J., D.G. Ortiz-Suslow, B.K. Haus, N.J. Williams, and **H.C. Gruber**, 2016: Water surface slope spectra in nearshore and river mouth environments. *IOP Conf. Ser.: Earth Environ. Sci.*, **35**, 012013.

2017 (8):

Lund, B., C.J. Zappa, **H.C. Gruber** and A. Cifuentes-Lorenzen, 2017: Shipboard wave measurements in the Southern Ocean. *J. Atmos. Oceanic Technol.*, **34**(9), 2113–2126.

Collins III, C.O., B. Blomquist, B. Lund, W.E. Rogers, J. Thomson, M. Smith, M. Doble, P. Wadhams, A. Kohout, O. Persson, C. Fairall, D. Wang, and **H.C. Gruber**, 2017: Doppler correction of wave frequency spectra measured by underway vessels. *J. Atmos. Oceanic Technol.*, **34**(2), 429–436. <https://doi.org/10.1175/JTECH-D-16-0138.1>

Laxague, N.J., B.K. Haus, D.G. Ortiz-Suslow, C.J. Smith, G. Novelli, H. Dai, T. Özgökmen, and **H.C. Gruber**, Passive optical sensing of the near-surface, wind-driven current profile. *J. Atmos. Oceanic Technol.*, **34**, 1097–1111. <https://doi.org/10.1175/JTECH-D-16-0090.1>

Stark, N., J. Mcninch, H. Wadman, **H.C. Gruber**, A. Albatal and P.A. Mallas, 2017: Friction angles at sandy beaches from remote imagery. *Géotechnique Lett.* 00, 1–6, <http://dx.doi.org/10.1680/jgele.17.00053>.

Cole, S.T., J.M. Toole, R. Lele, M.-L. Timmermans, S.G. Gallaher, T.P. Stanton, W.J. Shaw, B. Hwang, T. Maksym, J.P. Wilkinson, M. Ortiz, **H.C. Gruber**, L. Rainville, A.A. Petty, S.L. Farrell, J.A. Richter-Menge, and C. Haas, 2017: Ice and ocean velocity in the Arctic marginal ice zone: Ice roughness and momentum transfer. *Elem Sci Anth.*, **Art. 5:55**, 1-27. DOI: <http://doi.org/10.1525/elementa.241>

Hwang, B., J. Ren, S. McCormack, C. Berry, I. Ben Ayed, **H.C. Gruber**, E. Aptoula, 2017: A practical algorithm for the retrieval of floe size distribution of Arctic sea ice from high-resolution satellite Synthetic Aperture Radar imagery. *Elem Sci Anth.*, **Art. 5:38**. DOI: <http://doi.org/10.1525/elementa.154>

Hwang B., J. Wilkinson, E. Maksym, **H.C. Gruber**, A. Schweiger, C. Horvat, D.K. Perovich, A.E. Arntsen, T.P. Stanton, J. Ren, and P. Wadhams, 2017: Winter-to-summer transition of Arctic sea ice breakup and floe size distribution in the Beaufort Sea. *Elem Sci Anth.*, **Art. 5:40**. DOI: <http://doi.org/10.1525/elementa.232>

Potter, H., W.M. Drennan, and **H.C. Gruber**, 2017: Upper ocean cooling and air-sea fluxes under typhoons: A case study. *J. Geophys. Res. Oceans*, **122**, 7237–7252, doi:10.1002/2017JC012954.

2018 (4):

Laxague, N.J.M., B.K. Haus, D.G. Ortiz-Suslow and **H.C. Gruber**, 2018: Quantifying highly variable air-sea momentum flux using wavelet analysis. *J. Atmos. Oceanic Technol.*, **35**(9), 1849–1863.

- Ortiz-Suslow, D.G., B.K. Haus, N.J. Williams, **H.C. Graber** and J. MacMahan, 2018: Observation of air-sea momentum flux variability across the inner shelf. *J. Geophys. Res. Oceans*, <https://doi.org/10.1029/2018JC014348>
- Lund, B., **H.C. Graber**, P.O.G. Persson, M. Smith, M. Doble, J. Thomson, and P. Wadhams, 2018: Arctic sea ice drift measured by shipboard marine radar. *J. Geophys. Res. Oceans*, **123**, 4298–4321. <https://doi.org/10.1029/2018JC013769>
- Lund, B., B.K. Haus, J. Horstmann, **H.C. Graber**, R. Carrasco, N.J.M. Laxague, G. Novelli, C.M. Guigand, and T.M. Özgökmen, 2018: Near-surface current mapping by shipboard marine X-band radar: A validation. *J. Atmos. Oceanic Technol.*, **35**(5), 1077–1090. <https://doi.org/10.1175/JTECH-D-17-0154.1>