

## Sharon E. Stammerjohn

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### Research Interests

Polar oceanography and climate variability, ocean-atmosphere-ice interactions, ocean-atmosphere links to marine ecosystem variability

### Profession Preparation

**2006** Ph.D. Columbia University, New York, NY

**2004** M. Phil Columbia University, New York, NY

**1993** M.A. University of California, Santa Barbara, CA

**1986** B.A. University of Virginia, Charlottesville, VA

### Professional Experience

**2012-** Senior Research Associate, INSTAAR, University of Colorado Boulder

**2011-** Assistant Adjunct Professor, Ocean Sciences, UCSC

**2008-2011** Assistant Professor, Ocean Sciences, UCSC

**2008-** Doherty Associate (Adjunct) Research Scientist, LDEO/CU

**2006-2007** NOAA Postdoctoral fellow, NASA GISS

**1994-2001** Research Associate, ICES, UCSB

**1989-1991** Research Assistant, CBL, University of Maryland

### Select Publications

**Stammerjohn, S.**, and Maksym, T. (2017). Gaining (and losing) Antarctic sea ice: Variability, trends and mechanisms. In D. Thomas (Ed.), *Sea Ice, 3rd Edition*. West Sussex: Wiley-Blackwell (*in press*).

Evans C, Brandsma J, Pond DW, Venables HJ, Meredith MP, Witte, HJ, **Stammerjohn, S**, Wilson WH, Clarke A, Brussaard CPD. (2017). Drivers of interannual variability in virioplankton abundance at the coastal Western Antarctic Peninsula and the potential effects of climate change, *Environmental Microbiology and Environmental Microbiology Reports*, (*accepted*).

Heil, P., **Stammerjohn, S.**, Reid, P., Massom, R., and Hutchings, J. (2016). SIPEX 2012: Extreme sea-ice and atmospheric conditions off East Antarctica, *Deep-Sea Research Part II*, 131, 7-21, doi: 10.1016/j.dsr2.2016.06.015.

Stroeve, J., Crawford, A. D., and **Stammerjohn, S.** (2016). Using timing of ice retreat to predict timing of fall freeze-up in the Arctic, *Geophys. Res. Lett.*, 43, doi: 10.1002/2016GL069314.

Yager, P. L., Sherrell, R. M., **Stammerjohn, S. E.**, Ducklow, H. W., Schofield, O., Ingall, E. D., Wilson, S. E., Lowry, K. E., Williams, C. M., Riemann, L., Bertilsson, S., Alderkamp, A-C., Dinasquet, J., Logares, R., Richert, I., Sipler, R. E., Melara, A. J., Mu, L., Newstead, R. G., Post, A. F., Swalethorp, R., and van Dijken, G. L. (2016). A carbon budget for the Amundsen Sea Polynya, Antarctica: estimating net community production and export in a highly

- productive polar ecosystem. *Elem. Sci. Anth.*, **4**: 000140, 1-36, doi: 10.12952/journal.elementa.000140.
- Fountain, A., G. K. Saba, S. **Stammerjohn**, B. Adams, P. Doran, W. R. Fraser, M. Gooseff, M. Obryk, J. C. Priscu and R. A. Virginia. (2016). The role of a large-scale climate event on Antarctic ecosystem processes. *BioScience*, 66 (10), 848-863, doi: 10.1093/biosci/biw110.
- Obryk, M. K., P. T. Doran, A. S. Friedlaender, M. Gooseff, J. C. Priscu S. E. **Stammerjohn**, D. K. Steinberg, and H. W. Ducklow. (2016). Responses of Antarctic marine and freshwater ecosystems to changing ice conditions. *BioScience*, 66 (10), 848-863, doi: 10.1093/biosci/biw109.
- Hobbs, W. R., Massom, R., **Stammerjohn**, S., Reid, P., Williams, G., and Meier, W. (2016). A review of recent changes in Southern Ocean sea ice, their drivers and forcings. *Global and Planetary Change*, 143, 228-250, doi: 10.1016/j.gloplacha.2016.06.008.
- Stammerjohn, S.** (2016). Antarctica [in "State of the Climate in 2015"]. *Bulletin of American Meteorological Society*, 97(8), S155-S172.
- Meredith, M. P., **Stammerjohn, S. E.**, Venables, H. J., Ducklow, H. W., Martinson, D. G., Iannuzzi, R. A, Leng, M. J., van Wessem, J. M., Reijmer, C. H., and Barrand, N. E. (2016). Changing distributions of sea ice melt and meteoric water west of the Antarctic Peninsula. *Deep Sea Res Pt II*, <http://dx.doi.org/10.1016/j.dsr2.2016.04.019i>.
- Ndungu, K., Zurbrick, C. M., **Stammerjohn, S.**, Severmann, S., Sherrell, R. M., & Flegal, A. R. 2016. Lead sources to the Amundsen Sea, West Antarctica. *Environmental Science & Technology*. doi: 10.1021/acs.est.5b05151.
- Stammerjohn, S. E.**, Maksym, T., Massom, R. A., Lowry, K. E., Arrigo, K. R., Yuan, X., . . . Yager, P. L. 2015. Seasonal sea ice changes in the Amundsen Sea, Antarctica, over the period of 1979-2014. *Elem Sci Anth*, 3:000055, 1-20. doi:10.12952/journal.elementa.000055.
- Randall-Goodwin, E., Meredith, M. P., Jenkins, A., Yager, P. L., Sherrell, R. M., Abrahamsen, E. P., . . . **Stammerjohn, S. E.** 2015. Freshwater distributions and water mass structure in the Amundsen Sea Polynya region, Antarctica. *Elem Sci Anth*, 3: 000065, 1-22. doi:10.12952/journal.elementa.000065.
- Alderkamp, A.-C., Dijken, G. L., Lowry, K. E., Connelly, T. L., Lagerstrom, M., Sherrell, R. M., Haskins, T., Rogalsky, E., Schofield, O., **Stammerjohn, S. E.**, Yager, P., and Arrigo, K. R. 2015. Fe availability drives phytoplankton photosynthesis rates in the Amundsen Sea Polynya, Antarctica. *Elem Sci Anth*, 3: 000043. doi:10.12952/journal.elementa.000043.
- Ducklow, H.W., Wilson, S.E., Post, A.F., **Stammerjohn, S.E.**, Erickson, M., Lee, S., Lowry, K.E., Sherrell, R.M., and Yager, P.L., 2015. Particle flux on the continental shelf in the Amundsen Sea Polynya and Western Antarctic Peninsula. *Elementa: Science of the Anthropocene*, 3: 000046, doi 10.12952/journal.elementa.000046.
- Sherrell, R. M., Lagerstrom, M. E., Forsch, K. O., **Stammerjohn, S. E.**, and Yager, P. L. 2015. Dynamics of dissolved iron and other bioactive trace metals (Mn, Ni, Cu, Zn) in the Amundsen Sea Polynya, Antarctica. *Elem Sci Anth*, 3: 000071, doi: 10.12952/journal.elementa.000071.
- Reid P, **Stammerjohn S**, Massom R, Scambos T, Lieser J. 2015. The record 2013 Southern Hemisphere sea-ice extent maximum. *Annals of Glaciology*, 56:99-106.
- De Jong, J. T. M., **Stammerjohn, S. E.**, Ackley, S. F., Tison, J.-L., N.Mattielli, & Schoemann, V. 2015. Sources and fluxes of dissolved iron in the Bellingshausen Sea (West Antarctica): The importance of sea ice, icebergs and the continental margin. *Marine Chemistry*. doi:10.1016/j.marchem.2015.08.004.

- Fogt, R. L., & **Stammerjohn, S.** 2015. Antarctica [in "State of the Climate in 2014"]. *Bulletin of American Meteorological Society*, 96(7), S149-S167.
- Kavanaugh, M.T., Abdala, F.N., Ducklow, H., Glover, D., Fraser, W., Martinson, D., **Stammerjohn, S.**, Schofield, O., and Doney, S.C., 2015. Effect of continental shelf canyons on phytoplankton biomass and community composition along the western Antarctic Peninsula. *Marine Ecology Progress Series*, 524, 11-26, doi:10.3354/meps11189. Palmer LTER Contribution #0496.
- Steinberg, D.K., Ruck, K.E., Gleiber, M.R., Garzio, L.M., Cope, J.S., Bernard, K.S., **Stammerjohn, S.E.**, Schofield, O., Quetin, L.B., and Ross, R.M., 2015. Long-term (1993-2013) changes in macrozooplankton off the Western Antarctic Peninsula. *Deep-Sea Research I*, 101, 54-70, doi:10.1016/j.dsr.2015.02.009. Palmer LTER Contribution #0497.
- Ainley, D. G., Larue, M. A., Stirling, I., **Stammerjohn, S.**, & Siniff, D. B. (2015). An apparent population decrease, or change in distribution, of Weddell seals along the Victoria Land coast. *Marine Mammal Science*, n/a-n/a. doi:10.1111/mms.12220
- Massom RA, Reid P, **Stammerjohn S**, Barreira S, Scambos T, Leister J. 2014. Antarctica: Sea ice extent, concentration and duration [in "State of the Climate in 2013"]. *Bull. Amer. Meteor. Soc.*, 95:S150-S152.
- Mu L, **Stammerjohn SE**, Lowry KE, Yager PL. 2014. Spatial variability of surface pCO<sub>2</sub> and air-sea CO<sub>2</sub> flux in the Amundsen Sea Polynya, Antarctica. *Elementa*, 2:1-19.
- Saba GK, Fraser, WR, Saba, VS, Iannuzzi, RA, Coleman, KE, Doney, SC, Ducklow, HW, Martinson, DG, Miles, TN, Patterson-Fraser, DL, **Stammerjohn, SE**, Steinberg, DK, Schofield, OM. 2014. Winter and spring controls on the summer food web of the coastal West Antarctic Peninsula. *Nature Communications*, 5:1-8.
- Massom, R. A., P. Reid, B. Raymond, S. **Stammerjohn**, A. D. Fraser, and S. Ushio. 2013. Change and variability in East Antarctic sea ice seasonality, 1979/80 – 2009/10, *PLoSone*, 8(5), doi: 10.1371/journal.pone.0064756.
- Ducklow, H. W., W. R. Fraser, M. P. Meredith, S. E. **Stammerjohn**, S. C. Doney, D. G. Martinson, S. Saille, O. M. Schofield, D. L. Steinberg, H. Venables, C. D. Amsler, and M. Vernet, 2013. West Antarctic Peninsula: An ice-dependent coastal marine ecosystem in transition. *Oceanography*, 26 (3), 190-303, 2013. DOI <http://dx.doi.org/10.5670/oceanog.2013.62>.
- Schofield O, Ducklow H, Bernard K, Doney S, Patterson-Fraser D, Gorman K, Martinson D, Meredith M, Saba G, **Stammerjohn S**, Steinberg D, Fraser W. 2013. Penguin biogeography along the West Antarctic Peninsula: Testing the canyon hypothesis with Palmer LTER observations. *Oceanography* 26:78-80.
- Planquette, H., R. M. Sherrell, S. **Stammerjohn**, and P. M. Field. 2013. Particulate iron delivery to the water column of the Amundsen Sea, Antarctica, *Marine Chemistry*, 153, 15-30, 10.1016/j.marchem.2013.04.006.
- Stammerjohn, S., R. Massom, D. Rind and D. Martinson. 2012. Regions of rapid sea ice change: an inter-hemispheric seasonal comparison, *Geophysical Research Letters* , doi: 10.1029/2012GL050874.
- Stammerjohn, S., T. Maksym, P. Heil, R. A. Massom, M. Vancoppenolle, and K. C. Leonard. 2011. The influence of winds, sea surface temperature and precipitation anomalies on Antarctic Regional sea ice conditions during IPY 2007, *Deep Sea Research II* 58, 999-1018, doi: 10.1016/j.dsr2.2010.10.026.

- Stammerjohn, S. E., D. G. Martinson, R. C. Smith, X. Yuan and D. Rind. **2008**. Trends in Antarctic annual sea ice retreat and advance and their relation to ENSO and Southern Annular Mode Variability. *Journal of Geophysical Research* 113, C03S90, doi: 10.1029/2007JC004269.
- Stammerjohn, S. E., D. G. Martinson, R. C. Smith, and R. A. Iannuzzi. **2008**. Sea ice in the western Antarctic Peninsula region: spatio-temporal variability from ecological and climate change perspectives. *Deep Sea Research II*, 55 doi: 10.1016/j.dsr2.2008.04.026.
- Stammerjohn, S. E., M. R. Drinkwater, R. C. Smith, and X. Liu. **2003**. Ice-atmosphere interactions during sea-ice advance and retreat in the western Antarctic Peninsula region, *Journal of Geophysical Research*, 108 (C10), 10.1029/2002JC001543.
- Stammerjohn, S. E., and R. C. Smith. **1997**. Opposing Southern Ocean climate patterns as revealed by trends in regional sea ice coverage. *Climatic Change* 37: 617-639.
- Stammerjohn, S. E., and R. C. Smith. **1996**. Spatial and temporal variability of western Antarctic Peninsula sea ice coverage. Pages 81-104 in R. M. Ross, E. E. Hofmann, and L. B. Quetin, eds. *Foundations for Ecological Research West of the Antarctic Peninsula*. Antarctic Research Series Vol. 70, American Geophysical Union, Washington (DC).

### Professional Service since 2005

- Reviewer for NSF, NASA, NOAA, Australian Antarctic Program, Nature Geoscience, Nature Communications, Journal of Geophysical Research, Geophysical Research Letters, Progress in Oceanography, Climate Dynamics, Journal of Climate, International Journal of Climatology, Journal of Physical Oceanography, Deep-Sea Research II, Journal of Marine Systems, Antarctic Science, The Cryosphere; Member of AGU and AMS
- 2016** BAMS annual State of the Climate Antarctica, Editor 2015-present and Co-Author 2007-present; Key Note Speaker for Polar Research Board, National Academy of Sciences Workshops on Antarctic Sea Ice Variability in the Southern Climate-Ocean System (Boulder, CO); American Meteorological Society Polar Meteorology and Oceanography Committee, 2012-present; Scientific Committee on Antarctic Research (SCAR) Antarctic Sea Ice Processes and Climate (ASPeCt), 2011-present
- 2015** Council of Managers of National Antarctic Programs (COMNAP) Workshop on Sea Ice Challenges Invited Key Note Speaker (May, Hobart, AU); International Workshop on High Latitude Dynamics (March, Rosendal, Norway); Invited Speaker at the West Antarctic Ice Sheet (WAIS) Workshop (September, Loveland, CO)
- 2014** Scientific Committee and Key Note Speaker for the International Symposium on Sea Ice in a Changing Environment, International Glaciological Society (Tasmania, AU); Invited Speaker at the West Antarctic Ice Sheet (WAIS) Workshop (September, Julian, CA); Science Editor, Annals of Glaciology
- 2013** Contributions to the IPCC AR5 Working Group 1 (WG1) Chapter 4 (Vaughan et al., 2013, Observations: Cryosphere)
- 2012** International Workshop for IMCOAST (IMPact of Climate induced glacial melting on marine COASTal systems in the WAP region), representing Palmer LTER (April, Buenos

- Aires, AR); Workshop on the Effects of Climate Change and the Antarctic Toothfish Fishery on the Ross Sea Marine Ecosystem (March, La Jolla, CA); Invited Speaker at the 2012 Ocean Sciences Meeting (February, Salt Lake City, UT)
- 2011** International Workshop for the Scientific Committee on Antarctic Research (SCAR) Antarctic Sea Ice Processes and Climate (ASPeCt) on Renewing ASPeCt with Stronger Integration between Observations & Modeling (March, UCLA, CA); National Academy of Sciences Workshop convened by the Polar Research Board on the Legacy and Lessons of International Polar Year 2007-2008 (June, Leesbury, VA)
- 2010** Co-Chair of Predicting Climate Change and Its Impacts on the Pacific Sector of Antarctica at the 2010 Ocean Sciences Meeting (February, Portland, OR); National Academy of Sciences Workshop convened by the Polar Research Board on Frontiers in Understanding Climate Change and Polar Ecosystems (August, Cambridge, MD)
- 2009** International Workshop for the New Zealand Government & Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) on Ross Sea marine spatial protection and management (June, Wellington, NZ); NSF Workshop on Ecosystem Response to Diminished Snow and Ice in a Warming Climate (March-April, Woods Hole, MA); International Workshop for the Scientific Committee on Antarctic Research (SCAR) Antarctica and the Global Climate System (AGCS) & Antarctic Climate & Ecosystems Cooperative Research Center (ACE CRC) on Antarctic Sea Ice in IPY (March, Lucca, Italy); member of the Antarctic Research Vessel Oversight Committee (ARVOC)
- 2008** International Workshop for NSF and Swedish Research Council (VP)/Swedish Polar Research Secretariat (SPRS) on Identifying US/Swedish Science Themes for Future Oden research (February, Lejondals Slott, Sweden)
- 2007** NSF Workshop on Setting a Course for Antarctic Integrated System Science (AISS) (June, Arlington, VA)
- 2005** Workshop for The Digital Library for Earth System Education (DLESE) and Long-Term Ecological Research (LTER) to develop an online polar science curriculum for grades 6–12 (Steamboat Springs, Colorado)

### **Courses Taught**

Our Changing Planet (UCSC OCEA 80B, Spr09, Spr10)  
 The Marine Environment (UCSC OCEA 101, Win10, Win11)  
 Polar Oceanography & Climate (UCSC OCEA 290G, Spr09)  
 Polar Ice-Ocean Interactions (UCSC EART 290B, Spr10)  
 Ocean Sciences Seminar (UCSC OCEA 292, Fall09)

### **Graduate Students, Postdocs and Thesis Committees**

Ken Mankoff (with S. Tulaczyk), UCSC Earth Sciences Ph.D. student, 2009-  
 Evan Randall-Goodwin, UCSC Ocean Sciences Masters student, 2009-2012  
 Benjamin Saenz, UCSC Ocean Sciences Postdoctoral Fellow, 2011-  
 John Wiedenmann, UCSC, Ocean Sciences Ph.D. thesis committee, 2009-10  
 Kimberly Goetz, UCSC, Ecology & Evolutionary Biology Ph.D. thesis committee, 2012-  
 Travis Miles, Rutgers, Inst. of Marine & Coastal Sciences Ph.D. thesis committee, 2012-

### Field Campaigns since 1992

- 2015** NSF RVIB Sikuliaq. Office of Naval Research “Sea state and boundary layer physics of the emerging Arctic Ocean. Field Campaign in the Chukchi-Beaufort Sea
- 2011** NSF ARSV Laurence M. Gould (LMG1111) and Palmer Station. Palmer LTER Site Review
- 2010** NSF RVIB Nathaniel B. Palmer (NBP1005). Amundsen Sea Polynya International Research Expedition (ASPIRE)
- 2009** NSF RVIB Nathaniel B. Palmer (NBP0901). Amundsen Sea Embayment Project (ASEP), Ocean-ice shelf interactions and potential role of sea ice in ocean-ice shelf processes in relation to changes in sea ice concentration, extent and mass balance
- 2007** NSF RVIB Nathaniel B. Palmer (NBP0709). Sea Ice Mass Balance in Antarctica (SIMBA), IPY sea ice drift cruise in the Bellingshausen Sea; NSF IB Oden (OSO2007). Ocean-Atmosphere-Ice Interactions and Changes in the Amundsen and Ross Sea Regions
- 2001** NSF ARSV Laurence M. Gould (LMG0106) and RVIB Nathaniel B. Palmer (NBP0105). Two back-to-back five-week sea-ice cruises in the western Antarctic Peninsula region for the Southern Globec and Palmer LTER projects
- 1999** NSF RVIB Nathaniel B. Palmer (NBP9906). Five-week Palmer LTER austral winter sea-ice cruise in the western Antarctic Peninsula region
- 1992-4** NSF Palmer Station, Antarctica. Palmer LTER field and laboratory research during 1992-3 and 1993-4 austral summers (bi-weekly field sampling)
- 1992-3** NSF R/V Polar Duke. Two six-week Palmer LTER austral summer research cruises to the western Antarctic peninsula region

### Other Publications (1996-2012)

- Maksym, T., S. E. **Stammerjohn**, S. Ackley, and R. Massom. **2012**. Antarctic sea ice -- a polar opposite? *Oceanography*, 25(3), 140–151. doi:10.5670/oceanog.2012.88.
- Mankoff, K. D., S. S. Jacobs, S. M. Tulaczyk, S. E. **Stammerjohn**, **2012**. The role of Pine Island Glacier ice shelf basal channels in deep-water upwelling, polynyas and ocean circulation in Pine Island Bay, Antarctica, *Annals of Glaciology*, 53(60), doi: 0.3189/2012AoG60A062.
- Yager, P.L., R.M. Sherrell, S.E. **Stammerjohn**, A.-C. Alderkamp, O. Schofield, E.P. Abrahamsen, K.R. Arrigo, S. Bertilsson, D.L. Garay, R. Guerrero, K.E. Lowry, P.-O. Moksnes, K. Ndungu, A.F. Post, E. Randall-Goodwin, L. Riemann, S. Severmann, S. Thatje, G.L. van Dijken, and S. Wilson. **2012**. ASPIRE: the Amundsen Sea Polynya International Research Expedition. *Oceanography*, 25(3), 40-53, doi: 10.5670/oceanog.2012.73.

- Massom, R. A., P. Reid, S. **Stammerjohn**, S. Barreira, and T. Scambos. **2012**. Antarctica: Sea ice extent and concentration, in Blunden, J., and D. S. Arndt (eds) “State of the Climate 2011”, *Bull. Amer. Meteor. Soc.*, 93 (7), S157-S159.
- Randall-Goodwin, E. **2012**. *Detecting meltwater in the Amundsen Sea polynya region, West Antarctica*. Master’s Thesis, University of California Santa Cruz, 100pp.
- Ducklow, H. W., Schofield, O., Vernet, M., **Stammerjohn**, S., & Erickson, M., **2012**. Multiscale control of bacterial production by phytoplankton dynamics and sea ice along the western Antarctic Peninsula : A regional and decadal investigation. *Journal of Marine Systems*, 98-99, 26-39. Elsevier B.V. doi:10.1016/j.jmarsys.2012.03.003.
- Fountain, A., H. Ducklow, J. Campbell, T. Schuur, S. **Stammerjohn**, and M. Williams, **2012**. The disappearing cryosphere: Impacts and ecosystem responses to rapid cryosphere loss, *BioScience*.
- Massom, R. A., P. Reid, S. **Stammerjohn**, S. Barreira, and T. Scambos. **2011**. Antarctica: Sea ice extent and concentration, in Blunden, J., D. S. Arndt and M. O. Baringer (eds) “State of the Climate 2010”, *Bull. Amer. Meteor. Soc.*, 92 (6), S167-S170.
- Ducklow, H., A. Clarke, R. Dickhut, S. C. Doney, H. Geisz, K. Huang, D. G. Martinson, M. P. Meredith, H. V. Moeller, M. Montes-Hugo, O. Schofield, S. E. Stammerjohn, D. Steinberg and W. Fraser. **2011**. The Marine Ecosystem of the West Antarctic Peninsula, in *An Extreme Environment in a Changing World*, eds. Alex Rogers, Nadine Johnston, Andrew Clarke and Eugene Murphy, Blackwell Publishing.
- Smith, W.O., V. Asper, S. Tozzi, X. Liu and S. Stammerjohn. **2011**. Surface layer variability in the Ross Sea, Antarctica as assessed by *in situ* fluorescence measurements, *Progress in Oceanography*, doi:10.1016/j.pocean.2010.08.002.
- Massom, R.A., P. Reid, S. Stammerjohn and S. Barreira. **2010**. Antarctica: Sea ice extent and concentration, in Arndt, D. S., M. O. Baringer, M. R. Johnson (eds), “State of the Climate in 2009”, *Bull. Amer. Meteor. Soc.*, 91 (7), S131–S133.
- Montes-Hugo, M, C. Sweeney, S. C. Doney, H. W. Ducklow, R. Frouin, D. G. Martinson, S. E. Stammerjohn, and O. Schofield. **2010**. Seasonal forcing of summer dissolved inorganic carbon and chlorophyll a on the western shelf of the Antarctic Peninsula. *Journal of Geophysical Research*, 115, C03024, doi: 10.1029/2009JC005267.
- Meredith, M. P., M. I. Wallace, S. E. **Stammerjohn**, I. A. Renfrew, A. Clarke, H. J. Venables, D. R. Shoosmith, T. Souster, and M. J. Leng. **2010**. Changes in the freshwater composition of the upper ocean west of the Antarctic Peninsula during the first decade of the 21<sup>st</sup> century, *Progress in Oceanography*, doi:10.1016/j.pocean.2010.09.019.
- Montes-Hugo M., S. C. Doney, H. W. Ducklow, W. Fraser, D. Martinson, S. **Stammerjohn** and O. Schofield. **2009**. Recent Changes in Phytoplankton Communities Associated with Rapid Regional Climate Change Along the Western Antarctic Peninsula. *Science* 323: 1470-1473.
- Rind, D., J. Jonas, S. Stammerjohn and P. Lonergan. **2009**. The Antarctic ozone hole and the Northern Annular Mode: a stratospheric interhemispheric connection. *Geophysical Research Letters*, 36, L09818, doi: 10.1029/2009GL037866.
- Massom, R.A., P. Reid, S. Stammerjohn and S. Barreira. **2009**. Antarctica: Sea ice extent and concentration. In: Peterson, T.C. and M.O. Baringer, M.R. Johnson (eds), “State of The Climate in 2008”, *Bull. Amer. Meteor. Soc.*, 90(8), S118-S120.
- Smith, R. C., D. G. Martinson, S. E. Stammerjohn, R. A. Iannuzzi, and K. Ireson. **2008**. Bellingshausen and western Antarctic Peninsula region: pigment biomass and sea ice

- spatial/temporal distributions and interannual variability. *Deep Sea Research II*, 55 doi: 10.1016/j.dsr2.2008.04.027.
- Ducklow, H.W., M. Erickson, J. Kelly, M. Montes-Hugo, C.A. Ribic, R.C. Smith, S.E. Stammerjohn, and D.M. Karl. **2008**. Particle export from the upper ocean over the continental shelf of the west Antarctic Peninsula: A long-term record, 1992-2007. *Deep Sea Research II*, 55 doi: 10.1016/j.dsr2.2008.04.028.
- Martinson, D. G., S. E. **Stammerjohn**, R. C. Smith, and R. A. Iannuzzi. **2008**. Palmer, Antarctica, Long-Term Ecological Research program first 12 years: physical oceanography, spatio-temporal variability. *Deep Sea Research II* 55, doi: 10.1016/j.dsr2.2008.04.038.
- Ross, R.M., L.B. Quetin, D.G. Martinson, R.A. Iannuzzi, S.E. Stammerjohn, and R.C. Smith. **2008**. Palmer LTER: Patterns of distribution of five dominant zooplankton species in the epipelagic zone west of the Antarctic Peninsula, 1993-2004. *Deep Sea Research II*, 55 doi: 10.1016/j.dsr2.2008.04.037.
- Vernet, M., D.G. Martinson, R. Iannuzzi, S. Stammerjohn, W. Kozlowski, K. Sines, R. Smith, and I. Garibotti. **2008**. Primary production within the sea-ice zone west of the Antarctic Peninsula: 1. Sea ice, summer mixed layer, and irradiance. *Deep Sea Research II*, 55 doi: 10.1016/j.dsr2.2008.04.021.
- Massom, R. A., S. E. **Stammerjohn**, W. Lefebvre, S. A. Harangozo, N. Adams, T. Scambos, M. J. Pook, and C. Fowler. **2008**. West Antarctic Peninsula sea ice in 2005: extreme compaction and ice edge retreat due to strong anomaly with respect to climate, *Journal of Geophysical Research* 113, C02S20, doi: 10.1029/2007JC004239.
- Massom, R.A., P. Reid, S. Barrieria, & S. Stammerjohn. **2008**. Antarctica: Sea ice extent and concentration. In D.H. Levinson & J.H. Lawrimore (eds), "State of The Climate in 2007", *Bull. Amer. Meteor. Soc.*, 89, 7, S103-S104.
- Ducklow, H. W., K. Baker, W. Fraser, D. G. Martinson, L. B. Quetin, R. M. Ross, R. C. Smith, S. E. Stammerjohn, and M. Vernet. **2007**. Marine Ecosystems: the West Antarctic Peninsula. *Philosophical Transactions of the Royal Society B* 362, 67-94, doi: 10.1098/rstb.2006.1955.
- Ducklow, H.W., W. Fraser, D.M. Karl, L.B. Quetin, R.M. Ross, R.C. Smith, S.E. Stammerjohn, M. Vernet, and R.M. Daniels. **2006**. Water-column processes in the West Antarctic Peninsula and the Ross Sea: Interannual variations and foodweb structure. *Deep Sea Research II*, 53 doi: 10.1016/j.dsr2.2006.02.009.
- Massom, R. A., S. E. Stammerjohn, R. C. Smith, M. J. Pook, R. Iannuzzi, N. Adams, D. Martinson, M. Vernet, W. R. Fraser, L. B. Quetin, R. M. Ross, Y. Massom, and H. R. Krouse. **2006**. Extreme anomalous atmospheric circulation in the west Antarctic Peninsula region in austral spring and summer 2001/2, and its profound impact on sea ice and biota. *Journal of Climate* 19: 3544-3571.
- Perovich, D.K., B.C. Elder, K.J. Claffey, S. Stammerjohn, R. Smith, S.F. Ackley, H.R. Krouse, A.J. Gow. **2004**. Winter sea-ice properties in Marguerite Bay, Antarctica. *Deep-Sea Research II* 51, 2023-2039, doi: 10.1016/j.dsr2.2004.07.024.
- Smith, R. C., W. R. Fraser, and S. E. Stammerjohn. **2003**. Climate variability and ecological response of the marine ecosystem in the western Antarctic Peninsula (WAP) region. Pages 158-173 in D. Greenland, D. G. Goodin, and R. C. Smith, eds. *Climate Variability and Ecosystem Response at Long-Term Ecological Research Sites*, Oxford University Press, Inc., New York.
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- Smith, R. C., K. S. Baker, M. L. Byers, and S. E. Stammerjohn. **1998**. Primary Productivity of the Palmer Long Term Ecological Research Area and the Southern Ocean. *Journal of Marine Systems* 17: 245-259.
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### Invited Presentations (1997-2016)

- Stammerjohn, S., 2016, Patterns of Antarctic sea ice variability, observational insights, gaps and challenges, National Academies of Sciences/Polar Research Board Workshop on Antarctic Sea Ice Variability in the Southern Climate-Ocean System, Boulder, CO, January 11-12.
- Stammerjohn, S. et al, 2015, Tracking freshwater in the Amundsen Sea region, Invited Talk, WAIS workshop, Loveland, CO, September 16-18.
- Stammerjohn, S. et al, 2015, Near simultaneous climate events (2001-02) across Antarctica affect diverse ecosystems, All Scientists Meeting Working Group Sessions 1-2, August 30 - September 2.
- Stammerjohn, S, 2015, Comparing and Contrasting Regional Sea Ice Changes, COMNAP Sea Ice Challenges Workshop, Invited Talk, Hobart, Tasmania, May 12-13.
- Stammerjohn et al, 2015, Polar Sea Ice Changes over the Satellite Era and Key Questions, Invited Talk, High Latitude Dynamics Workshop, Rosendal, Norway, Mar 23-27.
- Stammerjohn, S., 2014, Localized sea ice changes in the Amundsen Sea, Invited talk, West Antarctic Ice Sheet (WAIS) Workshop 2014, 24-27 September.
- Stammerjohn, S., 2014, The changing Antarctic sea ice environment, Invited keynote, International Glaciological Society Symposium on Sea Ice, 9-14 March.
- Stammerjohn, S., 2013, The many riddles of Antarctic sea ice that thwart model projections, Invited talk, Gordon Research Conference in Polar Marine Science, Ventura, CA, 10-15 March.

- Stammerjohn, S., et al., 2012. Spatial and temporal variability in ocean-atmosphere-ice interactions along the western Antarctic Peninsula region and connections to ecosystem change, Invited talk, IMCOAST workshop (Impact of Climate induced glacial melting on marine COASTal systems in the WAP region), Buenos Aires, AR, 16-20 April.
- Stammerjohn, S. 2012. Ice-climate variability in the Ross Sea on seasonal to interannual time scales, Invited talk, Workshop to identify significant uncertainties concerning the effects of climate change and the Antarctic toothfish fishery on the Ross Sea Marine Ecosystem, La Jolla, CA, 27-30 March.
- Stammerjohn, S., R. Massom, D. Rind and D. Martinson, 2012. Regions of rapid sea ice change: an inter-hemispheric seasonal comparison, Invited talk, National Center for Atmospheric Research (NCAR) Climate and Global Dynamics (CGD) seminar, Boulder, CO, 23 March.
- Stammerjohn, S. et al., 2012. Highlights of recent studies of ocean-ice-ecosystem interactions and changes in the Western Antarctic Ocean, Invited overview talk for Session 115: Western Antarctic ocean ecosystems: chemical, physical and biological connections, Ocean Sciences Meeting 2012, Salt Lake City, UT, 20-24 February.
- Stammerjohn, S. 2011. Sea ice and ecology in the western Antarctic Peninsula Region, Invited presentation given at the CLIVAR/Clic/SCAR Southern Ocean Region Implementation Panel 7<sup>th</sup> Meeting, Boulder, 19-21 October.
- Stammerjohn, S. 2011. Regions of rapid sea ice decline: a polar comparison of ocean feedbacks, Invited presentation given at the ATOC Oceanography Seminar, University of Colorado, Boulder, 17 October.
- Stammerjohn, S. 2011. Sea ice and climate: variability and trends along the western Antarctic Peninsula, Invited presentation given at the International AP Workshop, Magdalene College, Cambridge, 26-28 July.
- Stammerjohn, S. 2010. Exploring Seasonal Sensitivities and Feedbacks in Regions of Rapid Sea Ice Decline, Invited plenary presentation given at the National Academy Sciences Workshop on Frontiers in Understanding Climate Change and Polar Ecosystems, Cambridge, MD, 24-25 August.
- Stammerjohn, S. 2010. What is Polar Amplification of Global Climate Change? Invited presentation given at the 2010 Ken Norris Memorial Lecture, A Decade of Marine Science: Lessons Learned, UCSC's Seymour Center at Long Marine Lab, 7 October.
- Stammerjohn, S. 2010. Rapid Regional Sea Ice Decline: Is this Polar Amplification of Global Climate Change? Three invited presentations given at: (1) California State University Monterey Bay (CSUMB) Coastal & Watershed Science & Policy M.S. Program Seminar Series, 20 September; (2) USC's Marine Biology and Biological Oceanography 2010-11 Seminar Series, 18-19 October; (3) the Synergy Lecture Series at UCSC, 21 October.
- Stammerjohn, S. 2009. Seasonal Ice-Ocean-Atmosphere Interactions: A Polar Comparison, Invited presentation given at the Gordon Research Conference on Polar Marine Science, Lucca, Italy, 15-20 March.
- Stammerjohn, S. 2009. Disappearance of Sea Ice, Invited presentation given at the NSF LTER Workshop on the Ecosystem Response to Diminished Snow and Ice in a Warming Climate, MBL, Woods Hole, 31 March – 1 April.
- Stammerjohn, S. 2009. Seasonal Sea Ice Changes, Ice-Climate Interactions, and Graduate Student Training in Polar Climate Research, Invited presentation given at the UCSC Alumni Weekend, 25 April.

- Stammerjohn, S., R. Massom, E. Maksym, R. Cullather, S. Jacobs, and D. Martinson. 2008. Wind-Driven Changes in Sea Ice Advance and Retreat and Ocean Freshening Near Antarctica, Invited presentation given at the AGU Fall 2008 Meeting in San Francisco, 15-19 December.
- Stammerjohn, S. E. 2006. Southern Ocean sea ice trends and inter-seasonal ice-ocean feedbacks, Invited presentation given at the 7th Summer Institute of the NOAA Postdoctoral Program in Climate and Global Change, Steamboat Springs, CO, 10-13 July.
- Stammerjohn, S. E., D. G. Martinson, R. C. Smith, and X. Yuan. 2006. Trends in sea ice retreat and subsequent advance in response to ENSO and SAM variability at high southern latitudes, Invited presentation given at the international workshop on Antarctic Peninsula Climate Variability: Observations, Models and Plans for IPY Research, Boulder, CO, 14-16 May.
- Stammerjohn, S. E., D. G. Martinson, R. C. Smith, and X. Yuan. 2006. Southern Ocean sea ice trends and response to climate variability, Invited presentation given at the MIT Atmospheres, Oceans and Climate Sack Lunch Seminars, 19 April.
- Stammerjohn, S. E., D. G. Martinson, and D. Rind. 2006. Trends in sea ice advance and retreat in the Southern Ocean: some possible mechanisms, Invited presentation given at a NASA workshop on Polar Feedbacks, Modeling and Synthesis, Boulder, CO, 8-10 February.
- Stammerjohn, S. E., R. C. Smith, M. R. Drinkwater, and X. Liu. 1998. Variability in sea-ice coverage and ice-motion dynamics in the PAL LTER study region west of the Antarctic Peninsula, Invited presentation given at IEEE 1998 International Geoscience and Remote Sensing Symposium, Seattle, WA, 6-10 July.
- Stammerjohn, S. E. 1997. Palmer Long-Term Ecological Research - a sea ice dominated marine ecosystem, Invited presentation given at iAnZone 5th Coordination meeting, a Joint International workshop between iAnZone and ASPeCt, Biosphere-2, Oracle, AR, 1-5 December.

### Recent Contributions to Media and Outreach

- Deke Arndt, “2014 State of the Climate: Author Q&A”, NOAA Climate.gov, July 15, 2015, (<https://www.climate.gov/news-features/features/2014-state-climate-author-qa>).
- Stephen Battersby, “[Thaw point: Why is Antarctica’s sea ice still growing?](#)”, New Scientist (UK), January 28, 2015.
- Natasha Vizcarra, “[Unexpected ice](#)”, Sensing Our Planet, NASA, January 2015.
- Julia Rosen, “[Does Antarctic sea ice growth negate climate change? Scientists say no](#)”, LA Times, August 29, 2014.
- Kathryn Smyrk, “[How wind helps Antarctic sea ice grow, even as the Arctic melts](#)”, The Conversation (Australia), March 12, 2014.
- Fran Kelly, “[Rapid Change in Arctic and Antarctic sea-ice](#)”, ABC Radio National (Australia), March 11, 2014.
- Australian Science Media Centre, “[Online Briefing](#)”, March 11, 2014.
- Henry Fountain, “[Still Stuck in a Climate Argument](#)”, New York Times, January 6, 2014.
- Jane Qui, “[Winds of Change](#)”, *Science*, 16 November, 2012: Vol. 338 no. 6109 pp. 879-881.
- Richard Harris, “[Scientists Watch Antarctica, Arctic Sea Ice Levels](#)”, National Public Radio Morning Edition, October 8, 2012.
- Peter Aldhous, “[Why Sea Ice Records are Poles Apart](#)”, New Scientist (UK), October 8, 2012.

National Snow and Ice Data Center (NSIDC), "[Poles Apart: A Record-Breaking Summer and Winter](#)", October 2, 2012.

Katherine Leitzell, "[Sea Ice Down Under: Antarctic Ice and Climate](#)", NSIDC Icelights, January 11, 2012.

Janelle Schroeder, "[Whale of a Find: Krill Feast in Antarctica?](#)", Medill Reports Chicago Northwestern University, April 27, 2011.