

# Deepwater moorings



## Research Projects

Global carbon project, Rob Jackson, Nebojsa Nakicenovic, 2001-2020, Partner Institution(s): International Geosphere-Biosphere Programme (IGBP); International Human Dimensions Programme on Global Environmental Change (IHDP); World Climate Research Programme (WCRP)

Controls on carbon uptake, Commonwealth Scientific Industrial Research Organisation, Bronte Tilbrook, 2008-2019, Partner Institution(s): Tom Trull; Elizabeth Shadwick

Response of pteropods to ocean acidification, University of Tasmania, Antarctic Climate and Ecosystems Cooperative Research Centre, Donna Roberts, William Howard, Stephen Bray, Tom Trull, 2009-2012, Partner Institution(s): ACE CRC, Department of Climate Change

Net community production in the Australian sector of the Southern Ocean, Nicolas Cassar, 2010-2014, Partner Institution(s): CSIRO, Princeton University, Duke University

NWP marine flux validation in the Australian region, Bureau of Meteorology, Eric Schulz, 2010-2012

Building long-term climate quality air-sea flux record in Southern Ocean, Bureau of Meteorology, Eric Schulz

CO2 program, University of Tasmania, Tom Trull, Partner Institution(s): UTAS, CSIRO, AAD, Funding: ACECRC

Air-sea interaction and seasonality of the mixed layer in the Subantarctic Zone, University of New South Wales, Commonwealth Scientific Industrial Research Organisation, Steve Rintoul, Bernadette Sloyan, Matthew England, 2011-2012, Partner Institution(s): Marvin Alfaro - Fullbright Scholar

Revisiting wave-induced mixing and current effects: observations and modelling based on the Southern Ocean Flux Station, Swinburne University, Commonwealth Scientific Industrial Research Organisation, Bureau of Meteorology, Alexander Babanin, Mark Hemer, Eric Schulz, 2012-2014, Funding: CSIRO

Validating the upgrade of Bureau NWP from APS0 to APS1, Bureau of Meteorology, National Oceanography Centre, Eric Schulz, Simon Josey

Grass of the oceans: quantifying biodiversity, environmental and climatic connectivity from a decade-long capture of Southern Ocean diatoms, Macquarie University, Andres Rigual-Hernandez, Leanne Armand, Tom Trull, Stephen Bray, 2013-2015, Partner Institution(s): UTAS-CSIRO-ACECRC, Funding: Australian Antarctic Sciences Program

In-depth analysis of the EAC and ITF mooring arrays and computation of mass, heat and salt time-series transports from collected data, Bernadette Sloyan, Ken Ridgway, Susan Wijffels, Rebecca Cowley, 2013-2014, Funding: Australian Climate Change Science Program (ACCSP)

Southern Ocean circulation and water mass formation in a warming world, Antarctic Climate and Ecosystems Cooperative Research Centre, Commonwealth Scientific Industrial Research Organisation, Steve Rintoul, Matthew England, 2013-2018, Partner Institution(s): UNSW, CSIRO, QNLM, Funding: Australian Antarctic Sciences Program, Australian Climate Change Science Program (ACCSP), ACECRC

Sensor based estimates of ocean productivity, Commonwealth Scientific Industrial Research Organisation, Tom Trull, 2013-2017, Funding: CSIRO, ACECRC, University of Tasmania

Advancing dynamical understanding in the East Australian Current: optimising the ocean observation and prediction effort, Sydney Institute for Marine Science, Moninya Roughan, 2014-2016, Funding: ARC

The Southern Ocean boundary layer: winds, turbulence, sea spray and clouds, Monash University, Steve Siems, Partner Institution(s): Manton (Monash), Belusic (Monash), Sullivan (NCAR), Keywood (CSIRO), Schulz (BOM), Funding: ARC Discovery Project

CAPRICORN: clouds, aerosols, precipitation, radiation and atmospheric composition over the Southern Ocean (Ship component of SOCRATES), Bureau of Meteorology, Alain Protat, 2015-2018, Partner Institution(s): Schofield (Melb UNI), Franklin (CSIRO), Keywood (CSIRO), Siems (MONASH), Alexander (AAD)

Towards large-scale estimates of photosynthetic competency: an assessment of iron stress and other environmental influences on sun-induced fluorescence quenching, Commonwealth Scientific Industrial Research Organisation, Christina Schallenberg, 2017-2018, Partner Institution(s): ACE CRC; CSIRO Oceans and Atmosphere, Funding: Natural Sciences and Engineering Research Council

Southern Ocean Waves Project, Melbourne University, Emmanuel Fontaine, I Young

Southern Ocean nanoplankton response to CO<sub>2</sub> (SONAR-CO<sub>2</sub>), Commonwealth Scientific Industrial Research Organisation, National Institute of Water and Atmospheric Research, University of Salamanca, University of Lisbon, Andres Rigual-Hernandez, 2017-2019, Funding: European Union Marie Curie Fellowship

Surface wind mixing in ocean models, University of New South Wales, Australian Defence Force Academy, Robin Robertson, 2017-2017, Funding: Defence Science and Technology Group

Carbon uptake and chemical change (ACE Project R2.1), Antarctic Climate and Ecosystems Cooperative Research Centre, Tom Trull, Andrew Bowie, 2017-2019, Partner Institution(s): IMOS, CSIRO - MNF, BOM, NOAA, Funding: ACECRC

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## Postgraduate Research Projects

Doctor of Philosophy (PhD), Late Pleistocene Palaeoceanographic and Geochemical Evolution of the South Tasman Rise, University of Tasmania, Antarctic Climate and Ecosystems Cooperative Research Centre; Andrew Moy, 2000-2005, Supervisor(s): William Howard

Doctor of Philosophy (PhD), Nitrogen isotopic fractionation during phytoplankton assimilation of nitrate, Princeton University, University of Tasmania; Kristen Karsh, 2006-2013, Supervisor(s): Daniel Sigman, Tom Trull

Doctor of Philosophy (PhD), Subantarctic zone nitrogen cycling, Princeton University; Peter DiFiore, 2006-2010, Supervisor(s): Daniel Sigman

Doctor of Philosophy (PhD), The role of aggregation in the control of particulate carbon export, Bremen University; Friederike Ebersbach, 2006-2010, Supervisor(s): Dieter Wolf-Gladrow, Tom Trull

Doctor of Philosophy (PhD), Coccolithophores evolution and calcification patterns of the late Quaternary in the Southern Ocean, University of Tasmania; Joana Cubillos, Supervisor(s): William Howard, Gustaaf Hallegraeff

Degree - Other, 3rd year Environmental engineering research project, University of Western Australia; Jacqui Doran, 2011-2012, Supervisor(s): Anya Waite, Tom Trull

Doctor of Philosophy (PhD), Acidification and carbonate chemistry of shelf waters in the Australian Antarctic Territory, University of Tasmania; Nick Roden, 2011-2014, Supervisor(s): Tom Trull, Bronte Tilbrook, E Shadwick, Patti Virtue; Funding: APRA, European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), CSIRO

Honours degree, Faecal pellet dynamics and carbon fluxes from gel-based sediment traps in the Southern Ocean, University of Western Australia; Jacqui Doran, 2012-2012, Supervisor(s): Anya Waite, Tom Trull

Degree - Other, KSA306 Marine Research project, Institute of Marine and Antarctic Studies; Ben Weeding, 2012-2012, Supervisor(s): Tom Trull

Doctor of Philosophy (PhD), Application of silicon isotopes to the quantification of biological pump processes in the Southern Ocean, University of Paris; Ivia Closset, 2012-2015, Supervisor(s): D Cardinal; Funding: ACECRC

Doctor of Philosophy (PhD), Controls on Southern Ocean carbon sequestration, University of Tasmania, Commonwealth Scientific Industrial Research Organisation; Emmanuel Laurenceau-Cornec, 2012-2015, Supervisor(s): Philip Boyd, Tom Trull, Mathieu Mongin

Honours degree, Biogenic silica fluxes at the Southern Ocean Time Series Site, University of Tasmania, Commonwealth Scientific Industrial Research Organisation; Chris Coxson, 2013-2013, Supervisor(s): Tom Trull; Funding: ACECRC

Honours degree, Multi-frequency bio-acoustic measurements of grazing animal abundances at the Southern Ocean Time Series Site, University of Western Australia; Ryan Walker, 2013-2013, Supervisor(s): Anya Waite, Tom Trull; Funding: University of Western Australia , ACECRC

Doctor of Philosophy (PhD), Waves and ocean interactions at the SOFS site, Swinburne University; Henrique Rapizo, 2013-2017, Supervisor(s): Alexander Babanin, Malek Ghantous, Eric Schulz

Doctor of Philosophy (PhD), Processes controlling Antarctic deep water formation, Australian National University; Kate Snow, Supervisor(s): Andrew Hogg, Stephanie Downes, Bernadette Sloyan

Doctor of Philosophy (PhD), Variability of Indonesian through flow property transports and modulation by Indian Ocean Dipole (IOD) and ENSO, University of Tasmania, Commonwealth Scientific Industrial Research Organisation; Ana Berger, 2014-2017, Supervisor(s): Bernadette Sloyan, Susan Wijffels, Max Nikurahsin; Partner Institution(s): CSIRO/IMAS/Brazilian Government - Brazilian Agency for Science - CAPES/ARC Centre of Excellence for Climate Systems Science; Funding: Brazilian Government

Doctor of Philosophy (PhD), Southern ocean microbial biogeography, University of Tasmania; Swan Sow, 2016-2019, Supervisor(s): Lev Bodrossy, Philip Boyd, Tom Trull

Doctor of Philosophy (PhD), The Southern Ocean boundary layer: winds, turbulence, sea spray and clouds, Monash University ; Vidhi Bharti, Supervisor(s): Steve Siems; Funding: ARC

## Book

Mapstone, B 2017, , Science and Solutions for Australia, Oceans, CSIRO, Clayton South

**Book 1**

## Book Chapters

Cronin, MF, Weller, RA, Lampitt, RS, Send, U 2012, Ocean Reference Stations, in RB Rustamov, SE Salahova (eds.), Earth Observation, InTech, Rijeka

Roughan, M, Schaeffer, A, Suthers, I 2015, Sustained ocean observing along the coast of southeastern Australia: NSW-IMOS 2007-2015, in Y Liu, H Kerkering, R Weisberg (eds.), Coastal Ocean Observing Systems, Elsevier, pp.76-98

Sloyan, B, Roughan, M, Hill, K 2018, The global ocean observing system, in EP Chassignet, A Pascual, J Tintore, J Verron (eds.), New Frontiers in Operational Oceanography, Academic Press, Fort Lauderdale

**Book Chapters 3**

## Community White Papers / Technical Papers

Ganachaud, AS, Bowie, AR, Brassington, GB, Cai, W, Cravette, S, Davis, R, Gourdeau, L, Hasegawa, T, Hill, K, Holbrook, N, Kessler, W, Maes, C, Melet, A, Qiu, B, Ridgway, K, Roemmich, D, Schiller, A, Send, U, Sloyan, B, Sprintall, J, Steinberg, C, Sutton, P, Verron, J, Widlansky, M, Wiles, P; 2013, Advances from the Southwest Pacific Ocean circulation and climate experiment, CLIVAR Exchanges Newsletter No 61, Vol 18, 16-23

Babanin, A, Schiller, A; 2014, Marine Sovereignty, Security and Safety Theme, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Tilbrook, B, et, al.; 2014, Ocean biogeochemistry (incl. carbon cycle, ocean acidification, marine chemistry), Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Santoso, A, et, al.; 2014, Tropical Oceanography Research in Australia, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Hogg, A, et, al.; 2014, Mid- to high-latitude oceans, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Moltmann, T, Llewellyn, L; 2014, Research Vessels, Experimental Facilities, Observing Systems and e-Research, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

**Community White Papers/Technical Papers 6**

## Conference Proceedings

Pender, L, Trull, T, McLaughlin, D, Lynch, T 2010, Pulse - a mooring for mixed layer measurements in the open ocean and extreme weather, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Trull, T, Schulz, E, Bray, SG, Pender, L, McLaughlin, D, Tilbrook, B, Rosenberg, M, Lynch, T 2010, The Australian Integrated Marine Observing System Southern Ocean Time Series facility, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Lynch, T, McLaughlin, D, Hughes, D, Darby, I, de Boer, P, Marouchos, A 2010, Overview of CSIRO oceanographic moorings, Proceedings of Oceans 2010 IEEE, Seattle, USA, September, 2010, Seattle

Beggs, H, Majewski, L, Paltoglou, G, Verein, R, Zhong, A 2011, Report to GHRST12 from Australia – BLUElink and IMOS, Proceedings of the 12th International GHRST Science Team Meeting, Edinburgh, UK, June, 2011, Edinburgh, Presenter: Helen Beggs

Beggs, H, Majewski, L, Kruger, G, Verein, R, Oke, PR, Sakov, P, Tingwell, C, Barass, V, Sandery, PA, Griffin, C 2012, Report to GHRST13 from Australia - BLUElink and IMOS, Proceedings of the 13th International GHRST Science Team Meeting, Tokyo, Japan, June, 2012, Tokyo

**Conference Proceedings 5**

## In Press

Sutton, A 2018, Autonomous seawater pCO<sub>2</sub> and pH time series from 40 surface buoys and the emergence of anthropogenic trends, Earth System Science Data, doi:<https://doi.org/10.5194/essd-2018-77>

**In Press 1**

## Journals

Boyd, PW, Trull, T 2006, Understanding the export of biogenic particles in oceanic waters: is there consensus?, Progress in Oceanography, vol. 72, no. 4, pp. 276-312, doi:10.1016/j.pocean.2006.1010.1007.

Cubillos, JC, Wright, SW, Nash, G, Salas, MF, Griffiths, B, Tilbrook, B, Poisson, A, Hallegraeff, GM 2007, Calcification morphotypes of the coccolithophorid *Emiliania huxleyi* in the Southern Ocean: changes in 2001 to 2006 compared to historical data, Marine Ecology Progress Series, vol. 348, pp. 47-54, doi:10.3354/meps07058

Bowie, AR, Lannuzel, D, Remenyi, TA, Wagner, T, Lam, PJ, Boyd, PW, Guieu, C, Townsend, AT, Trull, T 2009, Biogeochemical iron budgets of the Southern Ocean south of Australia: decoupling of iron and nutrient cycles in the subantarctic zone by the summertime supply, Global Biogeochemical Cycles, vol. 23, no. GB4034, doi:10.1029/2009GB003500

Moy, AD, Howard, WR, Bray, SG, Trull, T 2009, Reduced calcification in modern Southern Ocean planktonic foraminifera, Nature Geoscience, vol. 2, no. 4, pp. 276-280, doi:10.1038/NGEO46

DiFiore, PJ, Sigman, DM, Karsh, K, Trull, T, Dunbar, R, Robinson, R 2010, Poleward decrease in the isotope effect of nitrate assimilation across the Southern Ocean, Geophysical Research Letters, vol. 37, doi:10.1029/2010GL044090

Jacquet, SM, Lam, PJ, Trull, T, Dehairs, F 2011, Carbon export production in the Polar Front Zone and Subantarctic Zone south of Tasmania, Deep Sea Research Part II, vol. 58, no. 21, pp. 2277-2292, doi:10.1016/j.dsr2.2011.05.035

Howard, WR, Roberts, D, Moy, AD, Lindsay, MCM, Hopcroft, RR, Trull, T, Bray, SG 2011, Distribution, abundance and seasonal flux of pteropods in the Sub-Antarctic Zone, Deep Sea Research Part II, vol. 58, no. 21-22, pp. 2293-2300, doi:10.1016/j.dsr2.2011.05.031

Ebersbach, F, Trull, T, Davies, DM, Bray, SG 2011, Controls on mesopelagic particle fluxes in the sub-Antarctic and polar frontal zones in the Southern Ocean south of Australia in summer – Perspectives from free-drifting sediment traps, Deep Sea Research Part II, vol. 58, no. 21-22, pp. 2260-2276, doi:10.1016/j.dsr2.2011.05.025,

Schulz, E, Grosenbaugh, MA, Pender, L, Greenslade, DJM, Trull, T 2011, Mooring design using wave-state estimate from the Southern Ocean, *Journal of Atmospheric and Oceanic Technology*, vol. 28, no. 10, pp. 1351-1360, doi:10.1174/jtech-d-10-05033.1

Earp, A, Hanson, CE, Ralph, P, Brando, V, Allen, S, Baird, ME, Clementson, L, Daniel, P, Dekker, AG, Fearn, PRCS, Parslow, J, Strutton, P, Thompson, P, Underwood, M, Weeks, S, Doblin, MA 2011, Review of fluorescent standards for calibration of in situ fluorimeters: recommendations applied in coastal and ocean observing programs, *Optics Express*, vol. 19, no. 27, pp. 26768-26782, doi:10.1364/OE.19.026768

Bowie, AR, Griffiths, B, Dehairs, F, Trull, T 2011, Oceanography of the subantarctic and polar frontal zones south of Australia during summer: setting for the SAZ-Sense study, *Deep Sea Research Part II*, vol. 58, no. 21, pp. 2059-2070, doi:10.1016/j.dsr2.2011.05.033

Roberts, D, Howard, WR, Moy, AD, Roberts, J, Trull, T, Bray, SG, Hopcroft, RR 2011, Interannual pteropod variability in sediment traps deployed above and below the aragonite saturation horizon in the Sub-Antarctic Southern Ocean, *Polar Biology*, vol. 34, no. 11, pp. 1739-1750, doi:10.1007/s00300-011-1024-z

Shimada, K, Aoki, S, Oshima, KI, Rintoul, S 2012, Influence of the Ross Sea Bottom Water changes on the warming and freshening of the Antarctic bottom water in the Australian-Antarctic Basin, *Ocean Science*, vol. 8, pp. 419-432, doi:10.5194/os-8-419-2012

Brown, MV, Lauro, FM, DeMaere, MZ, Wilkins, D, Thomas, T, Riddle, MJ, Fuhrman, JA, Andrews-Pfannkoch, C, Hoffman, JM, McQuaid, JB, Allen, A, Rintoul, S, Cavicchioli, R 2012, Global biogeography of SAR11 marine bacteria, *Molecular Systems Biology*, vol. 8, doi:10.1038/msb.2012.28

Tamura, T, Williams, G, Fraser, AD, Ohshima, KI 2012, Potential regime shift in decreased sea ice production after the Mertz Glacier calving, *Nature Communications*, vol. 3, doi:10.1038/ncomms1820

Schulz, E, Josey, SA, Verein, R 2012, First air-sea flux mooring measurements in the Southern Ocean, *Geophysical Research Letters*, vol. 39, doi:10.1029/2012GL052290

van Sebille, E, Spence, P, Mazloff, MR, England, MH, Rintoul, S, Saenko, OA 2013, Abyssal connections of Antarctic bottom water in a Southern Ocean state estimate, *Geophysical Research Letters*, vol. 40, no. 10, pp. 2177-2182, doi:10.1002/grl.50483

Weeding, B, Trull, T 2014, Hourly oxygen and total gas tension measurements at the Southern Ocean Time Series site reveal winter ventilation and spring net community production, *Journal of Geophysical Research - Oceans*, vol. 119, no. 1, pp. 348-358, doi:10.1002/2013JC009302

Roberts, D, Howard, WR, Moy, AD, Roberts, J, Trull, T, Bray, SG, Hopcroft, RR 2014, Diverse trends in shell weight of three Southern Ocean pteropod taxa collected with Polar Frontal Zone sediment traps from 1997 to 2007, *Polar Biology*, vol. 37, no. 10, pp. 1445-1458, doi:10.1007/s00300-014-1534-6

Ganachaud, AS, Cravette, S, Melet, A, Schiller, A, Holbrook, N, Sloyan, B, et, al. 2014, The southwest Pacific Ocean circulation and climate experiment (SPICE), *Journal of Geophysical Research - Oceans*, vol. 119, no. 11, pp. 7660-7686, doi:10.1002/2013JC009678

Rigual-Hernandez, A, Trull, T, Bray, SG, Armand, L 2015, Latitudinal and temporal distributions of diatom populations in the pelagic waters of the subantarctic and polar frontal zones of the Southern Ocean and their role in the biological pump, *Biogeosciences*, vol. 12, pp. 5309-5337, doi:10.5194/bg-12-8615-2015

Shadwick, E, Trull, T, Tilbrook, B, Sutton, A, Schulz, E, Sabine, CL 2015, Seasonality of biological and physical controls on surface ocean CO<sub>2</sub> from hourly observations at the Southern Ocean Time Series site south of Australia, *Global Biogeochemical Cycles*, vol. 29, no. 2, pp. 223-238, doi:10.1002/2014GB004906

Grenier, M, Della Penna, A, Trull, T 2015, Autonomous profiling float observations of the high-biomass plume downstream of the Kerguelen Plateau in the Southern Ocean, *Biogeosciences*, vol. 12, no. 9, pp. 2707-2735, doi:10.5194/bg-12-2707-2015

Cassar, N, Wright, SW, Thompson, P, Trull, T, Westwood, KJ, De Salas, M, Davidson, A, Pearce, I, Davies, DM, Matear, R, Tilbrook, B 2015, The relation of mixed-layer carbon export production to plankton community, *Global Biogeochemical Cycles*, vol. 29, no. 4, pp. 446-462, doi:10.1002/2014GB004936

Rigual-Hernandez, A, Trull, T, Bray, SG, Closset, I, Armand, L 2015, Seasonal dynamics in diatom and particulate export fluxes to the deep sea in the Australian sector of the southern Antarctic zone, *Journal of Marine Systems*, vol. 142, pp. 62-74, doi:10.1016/j.marsys.2014.10.002

Muller, MN, Trull, T, Hallegraeff, GM 2015, Differing responses of three Southern Ocean *Emiliania huxleyi* ecotypes to changing seawater carbonate chemistry, *Marine Ecology Progress Series*, vol. 531, pp. 81-90, doi:10.3354/meps11309

Rapizo, H, Babanin, A, Schulz, E, Hemer, MA, Durrant, TH 2015, Observation of wind-waves from a floating buoy in the Southern Ocean, *Ocean Dynamics*, vol. 75, no. 9, pp. 1275-1288, doi:10.1007/s10236-015-0873-3

Closset, I, Cardinal, D, Bray, SG, Thil, F, Rigual-Hernandez, A, Trull, T 2015, Seasonal variations, origin, and fate of settling diatoms in the Southern Ocean tracked by silicon isotope records in deep sediment traps, *Global Biogeochemical Cycles*, vol. 29, no. 9, pp. 1495-1510, doi:10.1002/2015GB005180

Rigual-Hernandez, A, Trull, T, Bray, SG, Armand, L 2016, The fate of diatom valves in the Subantarctic and Polar Frontal Zones of the Southern Ocean: Sediment trap versus surface sediment assemblages, *Palaeogeography, Palaeoclimatology, Palaeoecology*, vol. 457, pp. 129-143, doi:10.1016/j.palaeo.2016.06.004

Davies, C, Coughlan, A, Ajani, P, Armbrrecht, L, Atkins, N, Bonham, P, Brett, S, Brinkman, R, et. al. 2016, A database of marine phytoplankton abundance, biomass and species composition in Australian waters, *Scientific Data*, vol. 3, doi:10.1038/sdata.2016.43

Kerry, C, Powell, B, Roughan, M, Oke, PR 2016, Development and evaluation of a high-resolution reanalysis of the East Australian Current region using the Regional Ocean Modelling System (ROMS 3.4) and Incremental Strong-Constraint 4-Dimensional Variational data assimilation (IS4D-Var), *Geoscientific Model Development*, vol. 9, pp. 3379-3801, doi:10.5194/gmd-9-3779-2016

Jordan, RW, Abe, K, Cruz, J, Eriksen, R, Guerreiro, C, Hagino, K, Heldal, M, Hernandez-Becerril, DU, Malinverno, E, Nishida, S, Patil, SM, Supraha, L, Thomsen, HA, Triantaphyllou, MV, Young, JR 2016, Observations on the morphological diversity and distribution of two siliceous nannoplankton genera, *Hyalolithus* and *Petasaria*, *Micropaleontology*, vol. 61, no. 6, pp. 439-455

Sloyan, B, Ridgway, K, Cowley, R 2016, The East Australian Current and property transport at 27oS from 2012-2013, *Journal of Physical Oceanography*, vol. 46, no. 3, pp. 993-1008, doi:10.1175/JPO-D-15-0052.1

Rigual-Hernandez, A, Trull, T, McCartney, K, Ballegeer, A, Lawler, K, Bray, SG, Armand, L 2016, Indices based on silicoflagellate assemblages offer potential for paleo-reconstructions of the main oceanographic zones of the Southern Ocean, *Geo-Marine Letters (International Journal of Marine Geology)*, vol. 36, no. 4, pp. 271-280, doi:10.1007/s00367-016-0444-8

Teniswood, CMH, Roberts, D, Howard, WR, Bray, SG, Bradby, JE 2016, Microstructural shell strength of the Subantarctic pteropod *Limacina helicina antarctica*, *Polar Biology*, vol. 39, no. 9, pp. 1643-1652, doi:10.1007/s00300-016-1888-z

Schaeffer, A, Gramouille, A, Roughan, M, Mantovanelli, A 2017, Characterizing frontal eddies along the East Australian Current from HF radar observations, *Journal of Geophysical Research - Oceans*, vol. 122, no. 5, pp. 3964-3980, doi:10.1002/2016JC012171

Conde-Pardo, P, Tilbrook, B, Langlais, C, Trull, T, Rintoul, S 2017, Carbon uptake and biogeochemical change in the Southern Ocean, South of Australia, *Biogeosciences*, vol. 14, pp. 5217-5237, doi:10.5194/bg-14-5217-2017

Wilks, JV, Rigual-Hernandez, A, Trull, T, Bray, SG, Armand, L, Flores, J-A 2017, Biogeochemical flux and phytoplankton succession: A year-long sediment trap record in the Australian sector of the Subantarctic Zone, *Deep Sea Research Part I*, vol. 121, pp. 143-159, doi:10.1016/j.dsr.2017.01.001

Moreau, S, Della Penna, A, Llorca, J, Patel, R, Langlais, C, Boyd, PW, Matear, R, Phillips, H, Trull, T, Tilbrook, B, Lenton, A, Strutton, P 2017, Eddy-induced carbon transport across the Antarctic Circumpolar Current, *Global Biogeochemical Cycles*, vol. 31, no. 9, pp. 1368-1386, doi:10.1002/2017GB005669

Muller, MN, Trull, T, Hallegraeff, GM 2017, Independence of nutrient limitation and carbon dioxide impacts on the Southern Ocean coccolithophore *Emiliana huxleyi*, *ISME Journal*, doi:10.1038/ismej.2017.53

Alford, M, Sloyan, B, Simmons, HL 2017, Internal waves in the East Australian Current , *Geophysical Research Letters*, vol. 44, no. 24, pp. 12280-12288, doi:10.1002/2017GL075246

Yu, L, Schulz, E, Josey, SA 2017, Air-Sea Interaction Regimes in the sub-Antarctic Southern Ocean and Antarctic Marginal Ice Zone Revealed by Icebreaker Measurements, *Journal of Geophysical Research - Oceans*, vol. 122, no. 8, pp. 6547-6564, doi:10.1002/2016JC012281

Archer, M, Roughan, M, Keating, S, Schaeffer, A 2017, On the Variability of the East Australian Current: Jet Structure, Meandering, and Influence on Shelf Circulation, *Journal of Geophysical Research - Oceans*, vol. 122, no. 11, pp. 8464-8481, doi:https://doi.org/10.1002/2017JC013097

Archer, M, Keating, S, Roughan, M, Johns, WE, Lumpkin, R, Beron-Vera, FJ 2018, The kinematic similarity of two western boundary currents revealed by sustained high-resolution observations, *Geophysical Research Letters*, vol. 45, no. 12, pp. 6176-6185, doi:10.1029/2018GL078429

Zilberman, N, Roemmich, D, Gille, ST, Gilson, J 2018, Estimating the Velocity and Transport of Western Boundary Current Systems: A Case Study of the East Australian Current near Brisbane, *Journal of Atmospheric and Oceanic Technology*, vol. 35, pp. 1313-1329, doi:10.1175/jtech-d-17-0153.1

Eriksen, R, Trull, T, Davies, DM, Jansen, P, Davidson, A, Westwood, KJ, Van den Enden, M 2018, Seasonal succession of phytoplankton community structure from autonomous sampling at the Australian Southern Ocean Time Series (SOTS) observatory, *Marine Ecology Progress Series*, vol. 589, pp. 13-31, doi:https://doi.org/10.3354/meps12420

Snow, K, Rintoul, S, Sloyan, B, Hogg, A 2018, Change in Dense Shelf Water and Adélie Land Bottom Water Precipitated by Iceberg Calving, *Geophysical Research Letters*, vol. 45, no. 5, pp. 2380-2387

Archer, M, Keating, S, Roughan, M, Johns, WE, Lumpkin, R, Beron-Vera, FJ 2018, The kinematic similarity of two western boundary currents revealed by sustained high-resolution observations, *Geophysical Research Letters*, vol. 45, no. 12, pp. 6176-6185, doi:10.1029/2018GL078429

**Journals 48**

## Reports

Poloczanska, ES, Hobday, A, Richardson, A 2012, Marine climate change in Australia, impacts and adaptation responses



Rintoul, S, Sparrow, M, Meredith, MP, Wadley, V, Speer, K, Hofmann, E, Summerhayes, CP, Urban, E, Bellerby, R, Ackley, S, Alverson, K, Anson, I, Aoki, S, Azzolini, R, Beal, L, Belbeoch, M, Bergamasco, A, Biuw, M, Boehme, L, Budillon, G, Campos, L, Carlson, J, Cavanagh, R, Charpentier, E, Chul Shin, H, Coffin, M, Constable, A, Costa, D, Cronin, MF, De Baar, H, De Broyer, C, de Bruin, T, De Santis, L, Butler, E, Dexter, P, Drinkwater, M, England, MH, Fahrbach, E, Fanta, E, Fedak, M, Finney, K, Fischer, A, Frew, R, Garzoli, SL, Gernandt, H, Gladyshev, S, Gomis, D, Gordon, A, Gunn, J, Gutt, J, Haas, C, Hall, J, Heywood, K, Hill, K, Hindell, MA, Hood, M, Hoppema, M, Hosie, G, Howard, WR, Joiris, C, Kaleschke, L, Kang, S, Kennicutt, MC, Klepikov, A, Lembke-Jene, L, Lovenduski, N, Lytle, V, Mathieu, PP, Moltmann, T, Morrow, R, Muelbert, M, Murphy, E, Naganobu, M, Naveira Garabato, A, Nicol, S, O'Farrell, S, Ott, N, Piola, A, Piotrowicz, S, Proctor, R, Qiao, F, Rack, F, Ravindra, R, Ridgway, K, Rignot, E, Ryabinin, V, Sarukhanian, E, Sathyendranath, S, Schlosser, P, Schwarz, J, Smith, G, Smith, S, Southwell, C, Speich, S, Stambach, W, Stammer, D, Stanfield, K, Thiede, J, Thouvenot, E, Tilbrook, B, Wadhams, P, Wainer, I, Willmott Puig, V, Wijffels, S, Woodworth, P, Worby, A, Wright, SW 2012, The Southern Ocean Observing System: Initial science and implementation strategy, SCAR and SCOR, Cambridge University Press

Schulz, E, Majewski, L 2012, Oceansat-2 wind validation using OceanSITES moorings

Trull, T 2013, Australian Marine National Facility Southern Surveyor voyage SS2013\_V03 Chief Scientist report

Schulz, E 2013, Marine National Facility Chief Scientist's report SS2013\_V06

Jansen, P 2014, SOTS oxygen measurements 2009-2014, SOTS oxygen data summary, Comments: CSIRO Marine and Atmospheric Research, internal report

Richardson, A, Eriksen, R, Rochester, W 2015, Plankton 2015: state of Australia's oceans, Comments: CSIRO Report; ISBN 978-1-4863-0565-0

Trull, T 2015, Marine National Facility RV Investigator voyage IN2014\_E04 - Mooring trials voyage, Comments: Chief Scientist Narrative

Trull, T 2015, Marine National Facility RV Investigator voyage IN2015\_v01 - IMOS Southern Ocean Time Series automated moorings for climate and carbon cycle studies Southwest of Tasmania voyage, Comments: Chief Scientist Summary Report

Trull, T, Schulz, E, Protat, A, Strutton, P 2016, Marine National Facility IN2016\_V02 Southern Ocean Time Series report

Rigual-Hernandez, A, McCartney, K, Trull, T, Ballegeer, A, Lawler, K, Bray, SG, Armand, L 2016, Silicoflagellate species diversity in the Australian sector of the Southern Ocean, ASPAB Membership Newsletter - Phytobytes

null

Trull, T 2017, RV Investigator Voyage INV2017\_v02 Scientific Highlights and Summary Report, Comments: CSIRO Marine National Facility Report Series, 43pp.

Schallenberg, C, Jansen, P, Trull, T 2017, Southern Ocean Time Series (SOTS) Quality Assessment and Control Report, Wetlabs FLNTUS instruments fluorescence and backscatter records, 2009-2016 Pulse and SOFS moorings, Comments: CSIRO Technical Report Series SOTS001, 40pp.

Trull, T 2017, Australian Antarctic Science Program, Comments: Annual Milestone Report, Season 2016/17, Project 4352, Integrated Marine Observing System Southern Ocean Time Series automated moorings for climate and carbon cycle studies southwest of Tasmania, 12pp.

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## Thesis

- Moy, AD 2005, Late pleistocene palaeoceanographic and geochemical evolution of the South Tasman Rise, Doctor of Philosophy (PhD), University of Tasmania, Hobart
- DiFiore, PJ 2010, Nitrate isotope dynamics in the Southern Ocean, Doctor of Philosophy (PhD), Princeton University, Princeton
- Ebersbach, F 2011, Flux and modification of sinking particles: three field studies in the Southern Ocean, Doctor of Philosophy (PhD), Bremen University, Bremen
- Doran, J 2012, Faecal pellet dynamics and carbon fluxes from gel-based sediment traps in the Southern Ocean, Honours degree, University of Western Australia, Perth
- Karsh, K 2013, Isotopic fractionation accompanying algal nitrate assimilation, Doctor of Philosophy (PhD), Princeton University, Princeton
- Coxson, C 2013, The role of biogenic silica in carbon cycling processes in the sub-Antarctic zone south of Australia, Honours degree, University of Tasmania, Hobart
- Cubillos, JC 2013, Calcification patterns of the coccolithophore *Coccolithus braarudii* (Haptophyta), from the late Quaternary to present in the Southern Ocean, Doctor of Philosophy (PhD), University of Tasmania, Hobart
- Closset, I 2015, The biogeochemical cycle of silicon in the Southern Ocean by isotopic approaches, Doctor of Philosophy (PhD), University of Paris, Paris
- Laurenceau-Cornec, E 2015, Ecosystem controls on carbon export efficiency from the naturally iron-fertilised phytoplankton bloom over the Kerguelen Plateau, Doctor of Philosophy (PhD), University of Tasmania, Hobart
- Roden, N 2016, Carbon cycling dynamics in the seasonal sea-ice zone of East Antarctica, Doctor of Philosophy (PhD), University of Tasmania, Hobart

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## Data Products

- Global Ocean Surface pCO<sub>2</sub> Data base (LDEO), (1956 - 2010) Database. [http://cdiac.ornl.gov/oceans/LDEO\\_Underway\\_Database/index.htm](http://cdiac.ornl.gov/oceans/LDEO_Underway_Database/index.htm)
- International Comprehensive Ocean Atmosphere Data Set (ICOADS), (1961 - 2029) Database. <http://icoads.noaa.gov/index.shtml>
- International Comprehensive Ocean-Atmosphere Data Set (ICOADS), (1961 - 2029) Database. <http://icoads.noaa.gov/> doi: 10.7289/V5CA3562
- The JellyFish Database Initiative, (1969 - 2010) Database. <http://condonlab.weebly.com/jedi.html>
- Global Telecommunication System (GTS), (1997 - 2029) Database. [http://www.wmo.int/pages/prog/www/TEM/GTS/index\\_en.html](http://www.wmo.int/pages/prog/www/TEM/GTS/index_en.html)
- Coriolis In Situ Analysis System (ISAS), (2004 - 2009) In Situ Gridded. <http://www.coriolis.eu.org/Science/Data-and-Products/Analysis-system>

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## Public Seminars

Sloyan, B, Ridgway, K; East Australian Current Mooring Array: Initial analysis of the 2012 mooring deployment underway and CTD data; CMAR Science Symposium - Science, Impacts, Possibilities, 20/03/2012 - 22/03/2012, Hobart, Presenter(s): Bernadette Sloyan

Trull, T, Weeding, B, Laurenceau-Cornec, E; Growing expertise in risky marine science; Unimutual Biannual Conference, 25/08/2013 - 25/08/2013, University of Tasmania, Hobart, Presenter(s): Tom Trull

Sloyan, B, Ridgway, K, Cowley, R; Sustained monitoring of the mass and heat transport of the EAC; CSIRO Seminar Series, 20/03/2014 - 20/03/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Bernadette Sloyan

Cowley, R, Sloyan, B, Wijffels, S, Ridgway, K; Data analysis techniques of mooring instruments; CSIRO Seminar Series, 15/05/2014 - 15/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Rebecca Cowley

Trull, T; Towards autonomous ocean observing: the IMOS Southern Ocean Time Series program; Japan Marine Science and Technology Core Lab Seminar, 07/10/2015 - 07/10/2015, Kochi, Presenter(s): Tom Trull

Trull, T; Antarctica: White, Black, and Red All-over? An outré autonomous excursion in interpretive dance; Australian Science Media Centre Annual General Meeting, 15/06/2017 - 15/06/2017, Hobart, Presenter(s): Tom Trull

**Public Seminars 6**

## Conferences, Symposia or Workshops

### Conference Oral Presentation

Schulz, E, Trull, T; The Australian Integrated Marine Observing System Southern Ocean Time Series Program, National Institute of Water and Atmospheric Research, Wellington, NZ, Nov. 2007; Australian Meteorological and Oceanographic Society (AMOS) Conference, 29/01/2008 - 01/02/2008, Geelong, Presenter(s): Eric Schulz

Schulz, E; Air-sea flux observing efforts in the Southern Ocean; Australia - New Zealand Climate Forum 2010, 13/10/2010 - 15/10/2010, Hobart, Presenter(s): Eric Schulz

Trull, T; Enhancement of Oceanic CO<sub>2</sub> uptake; International Union of Geophysics and Geology (IUGG) Earth on the Edge: Science for a Sustainable Planet, 28/06/2011 - 07/07/2011, Melbourne, Presenter(s): Tom Trull

Baird, ME, Oke, PR, Everett, JD, Griffin, DA, Doblin, MA, Pender, L, Suthers, I; Dynamics of a surface gravity current in a cold-core eddy in the western Tasman Sea; Australian Marine Science Association Conference, 03/07/2011 - 07/07/2011, Fremantle

Sloyan, B, Wijffels, S; Sustained monitoring in the Timor Passage and Ombai Strait: components of the Indonesian Throughflow; Australian Marine Science Association Conference, 03/07/2011 - 07/07/2011, Fremantle, Presenter(s): Bernadette Sloyan

Trull, T; Sensor based studies of Southern Ocean carbon and climate signals; UTAS Quantitative Marine Science Invited New Students PhD Days, 14/07/2011 - 15/07/2011, University of Tasmania, Hobart, Presenter(s): Tom Trull

Trull, T; Options for enhancement of oceanic CO<sub>2</sub> uptake; Australian Academy of Sciences and Australian Academy of Technical Sciences and Engineering Symposium on Geoengineering the Climate, 26/09/2011 - 27/09/2011, Canberra, Presenter(s): Tom Trull

Josey, SA, Schulz, E, Yu, L; First steps towards determination of the Southern Ocean air-sea heat exchange: Evaluating flux datasets using the SOFS mooring; 18th Australian Meteorological and Oceanographic Society (AMOS) Conference, 31/01/2012 - 03/02/2012, University of New South Wales, Sydney

Schulz, E; Evaluating the numerical weather prediction air-sea fluxes over the global ocean for Access-G; 18th Australian Meteorological and Oceanographic Society (AMOS) Conference, 31/01/2012 - 03/02/2012, University of New South Wales, Sydney

Trull, T; Advances in the understanding of the Southern Ocean carbon cycle; ACE CRC Annual Symposium, 08/03/2012 - 09/03/2012, Hobart, Presenter(s): Tom Trull

Wijffels, S, Sloyan, B, Steinberg, C; The Australian Integrated Marine Observing System's Indonesian throughflow and shelf moorings; CLIVAR ITF-Task Team Workshop Developing an Effective Monitoring Program of the Indonesian throughflow, 12/03/2012 - 14/03/2012, Jakarta

Schulz, E, Durrant, TH; Evaluating the numerical weather prediction - Air Sea Fluxes over the Global Ocean for ACCESS-G; 9th ACCESS/CAWCR Informal Workshop, 30/03/2012 - 30/03/2012, Melbourne, Presenter(s): Eric Schulz

Hill, K, Sloyan, B, Ridgway, K, Rintoul, S, Oke, PR; Variability in the East Australian Current: Existing evidence, and observing system plans; 10th International Conference on Southern Hemisphere Meteorology and Oceanography (ICSHMO) - Changing Southern Climates, 23/04/2012 - 27/04/2012, Noumea

Yu, L; Towards a balanced net heat flux at the ocean surface; NASA Clouds and Earth's Radiant Energy System (CERES) science team meeting, 01/05/2012 - 03/05/2012, Newport News, Presenter(s): Lisan Yu

Trull, T; Changing Southern Ocean biogeochemistry - the impact of iron and acidity; Australian Academy of Sciences Symposium "Antarctic Science - from Mawson's Expedition to today, 04/05/2012 - 04/05/2012, Canberra, Presenter(s): Tom Trull

Trull, T; Advances in Southern Ocean Carbon Cycle research; ACE CRC Mid-Term Review, 23/05/2012 - 23/05/2012, Hobart, Presenter(s): Tom Trull

Trull, T; The Southern Ocean Time Series moored sensing and sampling program - motivations for moving beyond biogeochemistry to marine microbial ecology; Autonomous, in situ microbial diagnostics and monitoring for microbial oceanography Workshop, 05/11/2012 - 06/11/2012, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Tom Trull

Sloyan, B, Wijffels, S, Cowley, R; Observations of the Pacific and Indian Ocean Exchange; Australian Meteorological and Oceanographic Society (AMOS) Conference, 11/02/2013 - 13/02/2013, Melbourne, Presenter(s): Bernadette Sloyan

Trull, T; An overview of Australian open ocean moored observatories; OceanSITES 9th Steering Committee and 6th Data Management Team Meetings, 27/05/2013 - 30/05/2013, Seoul, Presenter(s): Tom Trull

Sloyan, B, Wijffels, S, Cowley, R; The 2011-2012 Pacific and Indian Ocean Exchange: Initial results from the IMOS Timor Passage and Ombai Strait Moorings; AOGS - Asia Oceania Geosciences Society Annual Meeting, 24/06/2013 - 28/06/2013, Brisbane, Presenter(s): Bernadette Sloyan

Trull, T, Schulz, E; The Southern Ocean Time Series observatory: automated; Strategic Science in Antarctica - A Joint Australian and New Zealand Conference, 24/06/2013 - 26/06/2013, University of Tasmania, Hobart, Presenter(s): Tom Trull

Trull, T; Australian Bluewater Observing System; Partnership for Observation of the Global Oceans (POGO), 21/01/2014 - 24/01/2014, Hobart, Presenter(s): Tom Trull

Trull, T; Hourly observations at the Australian Integrated Marine Observing System Southern Ocean Time Series facility; Australian Meteorological and Oceanographic Society (AMOS) Conference, 12/02/2014 - 14/02/2014, Hobart, Presenter(s): Tom Trull

Trull, T; Net community production at the Southern Ocean Time Series site; Australian Meteorological and Oceanographic Society (AMOS) Conference, 12/02/2014 - 14/02/2014, Hobart, Presenter(s): Tom Trull

Closset, I, Cardinal, D, Thil, F, Bray, SG, Trull, T; Seasonal variation, origin and fate of settling diatoms in the Southern Ocean tracked by silicon isotope record in deep sediment traps; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Ivia Closset

Trull, T, Weeding, B, Bray, SG, Jansen, P, Schulz, E; Hourly observations at the Australian Southern Ocean Time Series indicate elevated net community production in the still-cooling, late-winter, deep mixed layer; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Tom Trull

Cardinal, D, Closset, I, Bray, SG, Trull, T; Composition of settling particles in the Southern Ocean and processes controlling seasonal variations of deep export production; European Geosciences Union (EGU) General Assembly, 27/04/2014 - 02/05/2014, Vienna, Presenter(s): D Cardinal

Sloyan, B, Cowley, R; Temporal and spatial variability of the East Australian Current; Australian Marine Science Association Conference, 07/07/2014 - 11/07/2014, Canberra, Presenter(s): Bernadette Sloyan

Robertson, R; Parameterization of vertical tidal mixing in ROMS; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Robin Robertson

Steinberg, C, Williams, DK, McAllister, F, Rigby, P, Spagnol, S, Brinkman, R, Benthuyzen, J, Pattiaratchi, C, Wijffels, S, Sloyan, B, Feng, M, Book, JW; Toward Sustained Ocean Observing across Tropical Northern Australian Shelf Seas; Australian Meteorological & Oceanographic Society (AMOS) Conference, 15/07/2015 - 17/07/2015, Brisbane, Presenter(s): Craig Steinberg

Waseda, T, Kiyomatsu, K, Fujimoto, W, Jansen, P, Schulz, E, Babanin, A, Rapizo, H; Observed orbital velocity of extreme waves and directional spectrum; 14th International Workshop on Wave Hindcasting and Forecasting & 5th Coastal Hazard Symposium, 08/11/2015 - 13/11/2015, Key West

Sloyan, B; Direct observations of the East Australian Current and property transport at 27 degrees South from 2012-2013; Ocean Sciences Meeting, 21/02/2016 - 26/02/2016, New Orleans, Presenter(s): Bernadette Sloyan

Passmore, A, Trull, T, Davies, DM, Smit, T; Distribution of pelagic biogenic carbonates south of Australia: a baseline for ocean acidification impact assessment; 4th Oceans in a high CO<sub>2</sub> World Symposium, 03/05/2016 - 06/05/2016, Hobart, Presenter(s): A Passmore

Doyle, H, Van Wijk, EM, Wallace, L, Trull, T; A climatology-based delayed mode QC procedure for Argo oxygen data; Australia-India Bio-Argo Workshop, 14/12/2016 - 16/12/2016, Perth, Presenter(s): Tom Trull

Boyer, T, Domingues, CM, Palmer, MD, Cowley, R, Hidas, MG; International Quality Controlled Ocean Database (IQuOD) version 0.1; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Tim Boyer

Bressac, M; Mesopelagic Iron Remineralization Patterns in High-Latitude, Low-Iron and Low-Latitude, High-Iron Oceanic Regions; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Matthieu Bressac

Laurenceau-Cornec, E, Mongin, M, Boyd, PW, Trull, T; Can Simulations Guide Observations to Better Capture the Efficiency of Particulate Carbon Export in the Ocean? ; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Emmanuel Laurenceau-Cornec

Trull, T; The distribution of pelagic biogenic carbonates in the Southern Ocean south of Australia: a baseline for ocean acidification impact assessment; Marine Ecosystem Assessment for the Southern Ocean (MEASO2018), 09/04/2018 - 13/04/2018, Hobart, Presenter(s): Tom Trull

Rintoul, S; Why is Antarctic Bottom Water disappearing?; Polar2018 - Where the poles come together, 15/06/2018 - 26/06/2018, Davos, Presenter(s): Steve Rintoul

Trull, T, et, al.; Autonomous Multi-trophic Observations of Southern Ocean Production and Export; Polar2018 - Where the poles come together, 15/06/2018 - 26/06/2018, Davos, Presenter(s): Tom Trull

Trull, T, et, al.; Scales of Southern Ocean Productivity Responses to Iron Inputs; Polar2018 - Where the poles come together, 15/06/2018 - 26/06/2018, Davos, Presenter(s): Tom Trull

Hodgson-Johnston, I, Lara-Lopez, A, Strutton, P, Trull, T, Conde-Pardo, P, Proctor, R; How the Integrated Marine Observing System can play a role in education; Australian Marine Sciences Association Conference, 01/07/2018 - 05/07/2018, Adelaide, Presenter(s): Indi Hodgson-Johnston

Trull, T; Autonomous multi-trophic observations of Southern Ocean production and export at SOTS; OceanSITES 12th Steering Committee and 8th Data Management Team Meetings, 02/07/2018 - 06/07/2018, Kiel, Presenter(s): Tom Trull

Trull, T; Autonomous multi-trophic observations of Southern Ocean production and export at SOTS; Southern Ocean and Climate Field Studies with Innovative tools (SOCLIM), 16/10/2018 - 16/10/2018, Paris, Presenter(s): Tom Trull

### Conference Poster

Trull, T; The Southern Ocean Time Series Observatory; AMSA-NZMSS (Australian Marine Sciences Association and New Zealand Marine Science Society) Conference, 01/07/2012 - 07/07/2012, Hobart, Presenter(s): Tom Trull

Kelly-Gerreyn, B, Ball, G, Beggs, H, Schulz, E, Cabrie, J, Robinson, P, Rodriguez, J, Casey, B; The Australian Bureau of Meteorology's core marine observing networks; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): Boris Kelly-Gerreyn

Moltmann, T, Proctor, R, Donoghue, S; The Integrated Marine Observing System: observations to support research and applications in the coastal zone; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Tim Moltmann

Kerry, C, Roughan, M, Powell, B; A high resolution re-analysis for the East Australian Current; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Steinberg, C, Williams, DK, McAllister, F, Rigby, P, Spagnol, S, Brinkman, R, Benthuyesen, J, Pattiaratchi, C, Wijffels, S, Sloyan, B, Feng, M; Toward sustained ocean observing across tropical northern Australian shelf seas; Blue Planet Symposium, 27/05/2015 - 29/05/2015, Cairns, Presenter(s): Craig Steinberg

Steinberg, C, Williams, DK, McAllister, F, Rigby, P, Spagnol, S, Brinkman, R, Benthuyesen, J, Pattiaratchi, C, Wijffels, S, Sloyan, B, Feng, M, Book, JW; Toward sustained ocean observing across tropical northern Australian shelf seas; Australian Forum for Operational Oceanography, 21/07/2015 - 23/07/2015, Fremantle, Presenter(s): Craig Steinberg

Kita, Y, Waseda, T, Schulz, E, Jansen, P, Nishida, T; Turbulence intensification of marine winds at midlatitude in the southern hemisphere; comparison with the northern hemisphere; Ocean Sciences Meeting, 21/02/2016 - 26/02/2016, New Orleans

Kelly-Gerreyn, B, Ingham, B, Warne, J, Beggs, H, Schulz, E; The Australian Bureau of Meteorology's core marine observing networks; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra

Rigual-Hernandez, A, Trull, T, Flores, J-A, Kloster, M, Fuertes, MA, Armand, L; Southern Ocean sediment traps: novel applications for understanding ecosystem functioning and the biological pump; Polar Marine Science Gordon Research Seminar, 26/03/2017 - 31/03/2017, Ventura, Presenter(s): Andres Rigual-Hernandez

Bharti, V, Siems, S, et, al.; AirSea fluxes over the Southern Ocean during CAPRICORN experiments; AMOS ICSHMO 2018, 05/02/2018 - 09/02/2018, University of New South Wales, Sydney, Presenter(s): Vidhi Bharti

Silvano, A, Rintoul, S, Williams, G, Pena-Molino, B; Cross-shelf exchange near the Totten Glacier; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Alessandro Silvano

Yu, L, et, al.; Air-Sea Flux Variability in the Southern Ocean as Represented by Buoys, Icebreaker, and Gridded Flux Products; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Lisan Yu

Conde-Pardo, P, Jansen, P, Passmore, A, Sutton, A, et, al.; Ocean acidification monitoring in Southern Australia: Results from IMOS moorings; South-east Australia Marine Climate Impacts and Adaptation symposium & workshop, 20/02/2018 - 21/02/2018, Commonwealth Scientific Industrial Research Organisation, Hobart

### Key Note Speaker

Sloyan, B; CSIRO decadal forecasting systems: observational requirements; EUMETSAT Meteorological Satellite Conference, 17/09/2018 - 21/09/2018, Tallinn, Presenter(s): Bernadette Sloyan

### **Meeting Presentation**

Schulz, E, Josey, SA; Southern Ocean Air-Sea Fluxes: recent developments; CLIVAR/CliC/SCAR Southern Ocean Region Implementation Panel 6th Meeting, 14/06/2010 - 17/06/2010, Southampton, Presenter(s): Simon Josey

Speer, K; Results of SOFS-NCEP validation; NSF Office of Polar Programs Advisory Committee Meeting, 10/11/2010 - 10/11/2010, Arlington, Presenter(s): Kevin Speer

Sloyan, B; IMOS long term monitoring of the East Australian Current; SPICE Science Planning Meeting, 13/04/2011 - 15/04/2011, Hobart, Presenter(s): Bernadette Sloyan

Hidas, MG; Integrated Marine Observing System (IMOS); 8th OceanSITES Steering Team Meeting, 01/12/2011 - 02/12/2011, La Jolla, Presenter(s): Marty Hidas

Trull, T; Net community production at the Southern Ocean Time Series; Bluewater & Climate Node Science Meeting, 28/11/2012 - 29/11/2012, Hobart, Presenter(s): Tom Trull

Schulz, E; Observations for understanding ocean-atmosphere interactions; American Association for the Advancement of Science (AAAS) annual meeting - , 14/02/2013 - 18/06/2013, Boston, Presenter(s): Eric Schulz

Steinberg, C, Moltmann, T; Australia's Integrated Marine Observing System; Joint WMO-IOC Commission for Oceanography and Marine Meteorology DBCP PI-1, 04/05/2015 - 07/05/2015, Koror, Presenter(s): Craig Steinberg

Schallenberg, C, Trull, T, Jansen, P; Southern Ocean Time Series Bio-optical QC; QA, QC and Product Summit, 05/06/2017 - 09/06/2017, South Australian Research and Development Institute, Adelaide, Presenter(s): Christina Schallenberg

Marouchos, A, Jansen, P, Martini, A; Sustaining Oceanographic Moorings in the Southern Ocean; Engineering Design and Challenges; IEEE OES Antarctic and Southern Ocean Forum, 14/08/2018 - 14/08/2018, Hobart, Presenter(s): A Marouchos

### **Symposium Presentation**

Trull, T; Quantifying the biological carbon pump using SOTS observations; ACE CRC Annual Symposium Carbon Program, 19/08/2010 - 19/08/2010, Antarctic Climate and Ecosystems Cooperative Research Centre, Hobart, Presenter(s): Tom Trull

Nodder, SM, Schulz, E, Trull, T; Deep-ocean observatories and biogeochemical and biophysical time-series data: New Zealand-Australia and international linkages; The New Zealand-Australia Symposium in Ocean Observing and Data Management, 05/12/2011 - 06/12/2011, Hobart, Presenter(s): Scott Nodder

Ridgway, K, Hill, K; The EAC system: mean flow and time-varying circulation; AMSA-NZMSS (Australian Marine Sciences Association and New Zealand Marine Science Society) Conference, 01/07/2012 - 07/07/2012, Hobart, Presenter(s): Ken Ridgway

Trull, T; Iron enrichment enhances phytoplankton biomass but not surface carbon export in the subantarctic Southern Ocean; AMSA-NZMSS (Australian Marine Sciences Association and New Zealand Marine Science Society) Conference, 01/07/2012 - 07/07/2012, Hobart, Presenter(s): Tom Trull

Trull, T, Weeding, B; Estimating the seasonal cycle of net community production in the subantarctic Southern Ocean from moored gas sensors; 45th International Liege Colloquium on Ocean Dynamics, 13/05/2013 - 17/05/2013, Liege, Presenter(s): Tom Trull

Shadwick, E; Advances in the understanding of Southern Ocean CO<sub>2</sub> uptake; ACE-CRC Annual Symposium, 04/06/2014 - 04/06/2014, Hobart, Presenter(s): E Shadwick

### **Workshop Presentation**

Trull, T; Australian Southern Ocean carbon cycle research - developing opportunities for collaboration; Ocean Carbon and Biogeochemistry Workshop, 10/07/2006 - 13/07/2006, Woods Hole Oceanographic Institute, Woods Hole, Presenter(s): Tom Trull

Trull, T; SOTS science goals and design parameters; Changing Times: International Ocean Biogeochemical Time-series Workshop, 05/11/2008 - 07/11/2008, Scripps Institution of Oceanography, San Diego, Presenter(s): Tom Trull

Pender, L, Trull, T, McLaughlin, D, Griffiths, B; SOTS design goals ; Office of Naval Research/Marine Technology Society - Buoy Workshop, 04/03/2009 - 06/03/2009, St. Louis, Presenter(s): L Pender

Schulz, E; Air-Sea Flux verification over the ocean; ACCESS Model Evaluation Workshop, 29/04/2010 - 29/04/2010, Bureau of Meteorology, Melbourne, Presenter(s): Eric Schulz

Bowie, AR; The need for observing the ocean at high temporal frequency to determine ocean carbon uptake and resultant ocean acidification; ACE CRC Research Users Forum, 15/06/2010 - 17/06/2010, Canberra, Presenter(s): Tom Trull

Trull, T; Advantages of basing international process studies in the well monitored waters south of Australia; ISIS Consortium Workshop on Ocean Iron Fertilization Research, 12/07/2010 - 14/07/2010, Woods Hole Oceanographic Institute, Woods Hole, Presenter(s): Tom Trull

Trull, T; Australian SAZ Programs; Workshop on the Seasonal Cycle of the Carbon-Climate System in the Southern Ocean, 23/08/2010 - 25/08/2010, Cape Town, Presenter(s): Tom Trull

Proctor, R; Australia's Integrated Marine Observing System (IMOS) ABOS and OceanSITES; Australia-EU Research Infrastructure Workshop, 26/06/2012 - 27/06/2012, Brussels, Presenter(s): Roger Proctor

Cowley, R; QC procedures for RDI ADCPs; Australian National Mooring Network QC Summit Meeting, 11/12/2013 - 12/12/2013, Hobart, Presenter(s): Rebecca Cowley

Ghantous, M; Applications of the wave induced mixing, historical and current; COEST/CSIRO Workshop: Deep-water Oceanographic Buoys: Deployments, Measurements, Outcomes, 05/05/2014 - 06/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Malek Ghantous

Jansen, P; Mooring design of the Southern Ocean buoy; COEST/CSIRO Workshop: Deep-water Oceanographic Buoys: Deployments, Measurements, Outcomes, 05/05/2014 - 06/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Peter Jansen

Jansen, P; Southern Ocean Time Series (SOTS); COEST/CSIRO Workshop: Deep-water Oceanographic Buoys: Deployments, Measurements, Outcomes, 05/05/2014 - 06/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Peter Jansen

Rapizo, H; Wave and current measurements at SOFS; COEST/CSIRO Workshop: Deep-water Oceanographic Buoys: Deployments, Measurements, Outcomes, 05/05/2014 - 06/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Henrique Rapizo

Schulz, E; Atmosphere, wave and ocean observations at the Southern Ocean Flux Station; COEST/CSIRO Workshop: Deep-water Oceanographic Buoys: Deployments, Measurements, Outcomes, 05/05/2014 - 06/05/2014, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Eric Schulz

Schulz, E, Weller, E, Trull, T; Sustained Southern Ocean air-sea flux mooring observations: past and future challenges; SOOS Air-Sea Flux Workshop, 21/09/2015 - 23/09/2015, Frascati, Presenter(s): Eric Schulz

Janekovic, I, Pattiaratchi, C, et, al.; Predicting the ocean and continental shelf dynamics off southeastern and central Western Australia using advanced ROMS capabilities; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra, Presenter(s): Ivica Janekovic



Roughan, M, Kerry, C, Rao, S, et, al.; Modelling and observing the East Australian Current system and its impacts on shelf circulation, Lagrangian transport and biogeochemistry; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra, Presenter(s): Moninya Roughan

Marouchos, A, Jansen, P, Martini, A; Sustaining Oceanographic Moorings in the Southern Ocean; Engineering Design and Challenges; MTS Buoy Workshop 2018, 09/04/2018 - 12/04/2018, Ann Arbour, Presenter(s): A Marouchos

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