

**VERONICA TAMSITT**  
Updated October 23, 2019  
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## **EDUCATION**

- Ph.D. Oceanography, Scripps Institution of Oceanography, UC San Diego, 2018  
Thesis: *Aspects of the three-dimensionality of the Southern Ocean Overturning Circulation*
- B.Sc. Oceanography with Honors, University of Washington, 2012  
Thesis: *Nitrous Oxide in the eastern tropical North Pacific*

## **PROFESSIONAL EXPERIENCE**

- Postdoctoral Research Associate, University of New South Wales and Centre for Southern Hemisphere Oceans Research, CSIRO Oceans and Atmosphere, 2018 – present
- Graduate Student Researcher, Scripps Institution of Oceanography, 2012 – 2018  
Advisor: Dr Lynne Talley
- Undergraduate Researcher, Stable Isotope lab, University of Washington, Department of Oceanography, 2010 – 2012  
Advisor: Dr Paul Quay

## **PEER-REVIEWED PUBLICATIONS**

9. Meijers, A., I. Cerovečki, B. A. King, and **V. Tamsitt** (2019). A see-saw in Pacific Subantarctic Mode Water formation driven by atmospheric modes, *Geophysical Research Letters*, in press.
8. Swart, S., S. T. Gille, B. Delille, S. Josey, M. Mazloff, L. Newman, A. F. Thompson, J. Thomson, B. Ward, M.D. Du Plessis, E.C. Kent, J. Girton, L. Gregor, P. Hyder, L. Ponzi Pezzi, R. Buss De Souza, **V. Tamsitt**, R.A. Weller, C.J. Zappa (2019). Constraining Southern Ocean air-sea-ice fluxes through enhanced observations, *Frontiers in Marine Science*, 6, 421.
7. **Tamsitt, V.**, M. R. Mazloff, and L. D. Talley, (2019). A Deep Eastern Boundary Current carrying Indian Deep Water south of Australia, *Journal of Geophysical Research: Oceans*, 124, 2218–2238.
6. Cerovečki, I., A. J. Meijers, M. R. Mazloff, S. T. Gille, **V. Tamsitt**, and P. R. Holland, (2019). The effects of enhanced sea ice export from the Ross Sea on recent cooling and freshening of the Southeast Pacific, *Journal of Climate*, 32, 2013–2035.
5. Ogle, S. E., **V. Tamsitt**, S. A. Josey, S. T. Gille, I. Cerovečki, L. D. Talley, and R. A. Weller, (2018). Episodic Southern Ocean heat loss and its mixed layer impacts revealed by the furthest south multi-year surface flux mooring, *Geophysical Research Letters*, 45, 5002–5010.
4. **Tamsitt, V.**, R. P. Abernathy, M. R. Mazloff, J. Wang, and L.D. Talley, (2018). Transformation of deep water masses along Lagrangian upwelling pathways in the Southern Ocean. *Journal of Geophysical Research: Oceans*, 123(3), 1994–2017.
3. **Tamsitt, V.**, H. Drake, A. K. Morrison, L. D. Talley, C. O. Dufour, A. R. Gray, S. M. Griffies,

M. R. Mazloff, J. L. Sarmiento, J. Wang, and W. Weijer, (2017). Spiraling pathways of global deep waters to the surface of the Southern Ocean. *Nature Communications*, 8, 172.

(see my news article on this paper on the [SOCCOM project website](#), commentary in [MIT news](#), [Los Alamos National Laboratory news](#), and a feature on data visualization in [Science News magazine](#))

2. Alberty, M.S., S. Billheimer, M. M. Hamann, C. Y. Ou, **V. Tamsitt**, A. J. Lucas, M. H., (2017). A reflecting, steepening, and breaking internal tide in a submarine canyon. *Journal of Geophysical Research: Oceans*, 122(8), 6872-6882.
1. **Tamsitt, V.**, L. D. Talley, M. R. Mazloff, and I. Cerovečki, (2016). Zonal variations in the Southern Ocean heat budget. *Journal of Climate*, 29(18), 6563-6579.

*In review and in prep*

**Tamsitt, V.**, I. Cerovečki, S. Josey, S. Gille, and E. Schulz. A comparison of mooring air-sea heat flux and mixed layers in the Southeast Indian and Southeast Pacific Subantarctic Mode Water formation regions, *in review at Journal of Climate*

**Tamsitt, V.**, M. H. England, and S. Rintoul, Pathways and residence time of warm Circumpolar Deep Water on the Antarctic continental shelf, *in prep*

#### **NON-REFEREED PUBLICATIONS**

3. S. Groeskamp, C. de Lavergne, R. Holmes, **V. Tamsitt**, I. Frenger, C. C. Chapman, E. Newsom, G. J. Stanley (2019). Climate recorded in seawater: A workshop on water-mass transformation analysis for ocean and climate studies, *Bulletin of the American Meteorological Society*
2. **V. Tamsitt** (2018). Moving Windows to the Deep Ocean. *Nature Climate Change*, 8(11), 941-942
1. S. Gille, I Cerovečki, M. Mazloff, and **V. Tamsitt** (2015). Estimating Southern Ocean air-sea fluxes from models and observations. *US CLIVAR Variations*, 13(4)

#### **INVITED PRESENTATIONS**

- V. Tamsitt**, 2019. *Lessons on comparing modelled Lagrangian and WMT perspectives on ocean circulation: a Southern Ocean upwelling experiment*, Oral Presentation, Water Mass Transformation Workshop, Sydney, Australia
- V. Tamsitt**, I. Cerovečki, S. Josey, S. Gille and E. Schulz, 2019. *A comparison of mooring air-sea heat flux and mixed layers in two key Subantarctic Mode Water formation regions*, Oral Presentation, Qingdao Ocean Science and Technology National Laboratory Annual Meeting, Qingdao, China
- V. Tamsitt**, 2018. *Aspects of the three-dimensionality of the Southern Ocean circulation*, CSIRO Oceans and Atmosphere Seminar, Hobart, Australia
- V. Tamsitt**, L. D. Talley, I. Cerovečki, and M. R. Mazloff, 2016. *Zonal variations in the Antarctic Circumpolar heat budget*, Invited Poster Presentation, Ocean Sciences Meeting, New Orleans, USA
- V. Tamsitt**, L. D. Talley, I. Cerovečki, and M. R. Mazloff, 2015. *Southern Ocean State Estimate air-sea heat fluxes and the ACC heat budget*, Oral Presentation, SOOS/WCRP/ESA Air-sea flux

## **SELECTED CONFERENCE AND WORKSHOP PRESENTATIONS**

- V. Tamsitt**, M. England, and S. Rintoul, 2019. *Lagrangian connectivity and residence time of warm Circumpolar Deep Water on the Antarctic continental shelf*, AMOS-ICTMO Conference, Darwin, Australia
- V. Tamsitt**, I. Cerovečki, S. Josey, S. Gille and E. Schulz, 2018. *Comparison of variability in air-sea heat fluxes and Subantarctic Mode Water formation from concurrent mooring observations in the Southeast Indian and Southeast Pacific*, AGU Fall meeting, Washington D.C., USA
- V. Tamsitt**, L. D. Talley, and M. R. Mazloff, 2018. *Structure and dynamics of an Indian Deep Eastern Boundary Current along the southern coast of Australia*, Oral Presentation, Ocean Sciences Meeting, Portland, USA
- S. Ogle, **V. Tamsitt**, S., Josey, S. Gille, I. Cerovečki, L. D. Talley, and R. Weller, 2018. *Extreme heat flux events and their impact on Subantarctic Mode Water formation revealed by the Southern Ocean OOI mooring*, Poster Presentation, Ocean Sciences Meeting, Portland, USA
- V. Tamsitt**, M. R. Mazloff, and L. D. Talley, 2018. *An Indian Deep Water pathway along the south coast of Australia*, Oral Presentation, AMOS-ICSHMO Meeting, Sydney, Australia
- V. Tamsitt**, 2017. *Pathways of upwelling deep waters to the surface of the Southern Ocean*, Oral Presentation, EGU Annual meeting, Vienna, Austria
- V. Tamsitt**, 2017. *Pathways of upwelling deep waters to the surface of the Southern Ocean*, Oral Presentation, NCAR Southern Ocean Workshop, Boulder, USA
- V. Tamsitt**, L. D. Talley, and M. R. Mazloff, 2017. *Connecting sources of circumpolar deep water to the Antarctic continental shelf using lagrangian pathways*, Oral Presentation, AGU Fall meeting, San Francisco, USA
- V. Tamsitt**, L. D. Talley, J. Wang, and M. R. Mazloff, 2016. *Lagrangian pathways of deep water upwelling in the Southern Ocean State Estimate*, Poster Presentation, Ocean Sciences Meeting, New Orleans, USA
- V. Tamsitt**, V., L. D., Talley, I. Cerovečki, and M. R. Mazloff, 2015. *Zonal variations in the Southern Ocean heat budget*, Oral Presentation, IUGG meeting, Prague, Czech Republic
- V. Tamsitt**, L. D. Talley, and M. R. Mazloff, 2014. *Heat gain in the Southern Ocean: Regional heat budgets using the Southern Ocean State Estimate*, Poster Presentation, Ocean Sciences Meeting, Honolulu, Hawaii

## **PROFESSIONAL SERVICE**

- Chair, National Education and Outreach Committee, Australian Meteorological and Oceanographic Society, 2019 – present
- Seminar coordinator, CSIRO Oceans and Atmosphere seminar, Hobart, 2018 – present
- Workshop co-organiser, Water Mass Transformation Workshop, University of New South Wales, Sydney, 2019
- Student representative, Scripps Institution of Oceanography faculty hiring committee, 2016
- Steering Leadership Committee member, Scripps Institution of Oceanography peer mentorship program, 2014 – 2016
- Reviewer for Nature, Nature Communications, Nature Climate Change, Geophysical Research Letters, Journal of Geophysical Research: Oceans, and Journal of Physical Oceanography,

2017 – present

Professional Member, American Geophysical Union, 2013 – present

Professional Member, Australian Meteorological and Oceanographic Society, 2013 – present

### **TEACHING AND MENTORSHIP EXPERIENCE**

Co-supervisor, Bachelor of Marine and Antarctic Science (Physical Oceanography) Honours Project, Kai Wang. Project: Upwelling of Circumpolar Deep Water in a meander of the Antarctic Circumpolar Current, 2019 – 2020

Scientific trainer, CAPSTAN 2019 training voyage on the RV Investigator, 2019

Supervisor, undergraduate student research assistant, Project: Southern Ocean air-sea heat flux from mooring observations, Scripps Institution of Oceanography (resulted in publication Ogle et al. 2018), 2015 – 2018

Instructor and Course Developer, UCSD Academic Connections, Washington D. C. program, a two-week intensive summer class on climate and ocean science and policy, 2015 – 2018

Chief Scientist, GOTO:SEE high school summer class educational cruise, R/V Sproul, San Diego Bay, 2016

Teaching Assistant, University of Washington, Introduction to Oceanography Lab, 2012

Teaching Assistant, University of Washington, Oceanography of the Pacific Northwest, 2011

### **OUTREACH AND COMMUNICATION**

Participating Scientist, STEM Professionals in Schools program, Hobart College, 2018 – present

Contributing writer, Oceanbites.org blog (28 monthly blog posts), 2015 – 2018

Participating Scientist, NCSeteach Scientists in the Classroom program, Granite Hills High School, 2015 – 2018

Graduate student volunteer, Birch Aquarium at Scripps Beach Science program for middle school students, 2015 – 2018

Conference participant, ComSciCon San Diego conference for graduate students, 2016

Guest speaker on ‘Our Oceans in a Changing Climate’, St Pauls Cathedral San Diego Creation Care Sundays, 2016

Blogger, Southern Ocean Carbon and Climate Observations and Modeling (SOCCOM) Project, 2015 – 2016

Participant and aquarium hands on activity developer, Communicating Science to Informal Audiences graduate course at Scripps Institution of Oceanography, 2014

### **HONORS AND AWARDS**

Selected to attend PODS - Physical Oceanography Dissertation Symposium (declined), 2018

Graduate Student Excellence Travel/Research Award, Scripps Institution of Oceanography, 2013/2015

George Mitchell Fellowship for graduate study at Scripps Institution of Oceanography, 2012 – 2013

Scholar-Athlete award, University of Washington, 2012

Pac-12 Postgraduate Scholarship, 2012

## **FIELD WORK**

- Instructor and CTD lead: CAPSTAN, RV Investigator, Hobart, Tasmania to Fremantle, Western Australia, Apr – May 2019, Chief Scientist: Leah Moore (Univ. of Canberra) (11 days)
- Invited Scientist, Southern Ocean: *DEFLECT*, RV Investigator, Hobart, Tasmania, Oct – Nov 2018, Chief Scientist: Nathan Bindoff (UTAS) (31 days)
- Chief Scientist, San Diego Bay: *GOTO:SEE*, RV Sproul, San Diego, California, July 2016 (2 days)
- CTD samples and float deployments, data analysis, Southern Ocean: *OOI Southern Ocean II*. RV Palmer, Punta Arenas, Chile, Dec 2015 - Jan 2016, Chief Scientist: Sebastien Bigorre (WHOI) (30 days)
- CTD watchstander, co-PI, Southern California coast: *LaJIT experiment*. RV Sproul, San Diego, California, Dec 2015, Chief Scientist: Matthew Alford (SIO) (3 days)
- CTD watchstander, South Pacific: *U.S. Repeat Hydrography section P16S*. RV Palmer, Hobart, Tasmania to Papeete, French Polynesia, Mar – May 2014, Chief scientist: Lynne Talley (48 days)
- CTD watchstander, Nitrous Oxide analyst, Eastern tropical North Pacific: *Control of Denitrification and Anammox in Oxygen Minimum Zones (OMZs)*, RV Thompson, San Diego, California to Manzanillo, Mexico, April 2012 (10 days)