DAVID W. J. THOMPSON
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EDUCATION

Ph.D. Dep't. of Atmospheric Sciences, University of Washington, Seattle, Wa. 2000
M.S. Dep't. of Atmospheric Sciences, University of Washington, Seattle, Wa. 1998
B.S. Dep't. of Aerospace Engineering, University of Colorado, Boulder, Co. 1994

POSITIONS

2021 - present. Professor, School of Environmental Sciences, University of East Anglia.
2011 - present. Professor, Dept. of Atmospheric Sciences, Colorado State University.
2006 - 2011. Associate Professor, Dept. of Atmospheric Sciences, Colorado State University.
2001 - 2006. Assistant Professor, Dept. of Atmospheric Sciences, Colorado State University.

EXTENDED RESEARCH VISITS (VISITING SCHOLAR / FELLOW / ETC)

Weizmann Institute, Rehovot, Israel June 2019.
Universities of Tokyo, Kyoto, Hokkaido. June-July 2018.
ETH, Zurich, Switzerland. August 2015-June 2016.
University of Barcelona, Barcelona, Spain. July 2014.
DLR, Munich, Germany. July 2012.
UNSW, Sydney, Australia. October-December 2010.
Bjerknes Centre/University of Bergen, Bergen, Norway. June 2009.
University of Reading, Reading, UK. February-June 2008.
NIWA, Lauder, New Zealand. January 2008.
BMRC, Melbourne, Australia. October-December 2007.
NIWA, Lauder and Wellington, New Zealand. December 2004-March 2005.

REFEREED PUBLICATIONS

(**Bold font** denotes group member; ResearcherID: F-9627-2012)

In review/press

Fredericks, W. L., M. Rugenstein, **D. W. J. Thompson,** S. Van Loon, F. Falasca, R. Basinski-Ferris, P. Ceppi, Q. Wu, J. Bloch-Johnson, M. Alessi, and S. M Kang, 2026: Quantifying the radiative response to surface temperature variability: A critical comparison of current methods. *J. Climate*, in review.

Chen, Y.-J. and **D. W. J. Thompson**, 2026: Identifying the observed influence of the QBO on tropical tropospheric climate. *J. Geophys. Res.*, in review.

Li, Y., B. D. Santer, S. Solomon, **D. W. J. Thompson**, and Q. Fu, 2025: Detectable Global Temperature Responses to Wildfires and Volcanic Eruptions. *PNAS*, in review.

Lim, E.-P., **D. W. J. Thompson**, A. H. Butler, M. C. Wheeler, H. Nakamura, M. Jucker, J. M. Arblaster, H. H. Hendon, P. A. Newman, L. Coy, 2025: Characteristics of Antarctic stratospheric variability during winter: A case study of the 2024 sudden stratospheric warming and its surface impacts. *J. Geophys. Res.* in review.

Yook, S. and **D. W. J. Thompson**, 2025: Inferred Increases in the Convective Entrainment Rate under Climate Change: Implications for Tropical Temperature Trends. *J. Climate,* in revision.

Fredericks, L., **D. W. J. Thompson**, and M. Rugenstein, 2025: An Observational Estimate of the Spatial Sensitivity Governing the Pattern Effect Using Regularized Linear Regression. *J. Climate,* in press.

Boehm, C., **D. W. J. Thompson**, and E. Blanchard-Wrigglesworth, 2025: Interpretation of Recent Antarctic Sea Ice Loss: The Key Role of the Southern Annular Mode during the Seasonal Sea

Ice Maximum. *Nature Communications and Environment*, in press. https://www.researchsquare.com/article/rs-6207339/v1

Published

Thompson, D. W. J., M. Rugenstein, P. M. Forster, and **L. Fredericks**, 2025: An Observational Estimate of the Pattern Effect on Climate Sensitivity: The Importance of the Eastern Tropical Pacific and Land Areas. *J. Climate*, **38**, 4233-4249. https://doi.org/10.1175/JCLI-D-23-0737.1.

Santer, B. D., S. Solomon , **D. W. J. Thompson**, Q. Fu , and Y. Li., 2025: Human Influence on Climate Detectable in the Late 19th Century. *Proceedings of the Nat. Academy Sci.*, https://doi.org/10.1073/pnas.2500829122.

Sun, L., C. Patrizio, **D. W. J. Thompson**, and J. W. Hurrell, 2025: Influence of Anomalous Ocean Heat Transport on the Extratropical Atmospheric Circulation in a High-Resolution Slab-Ocean Coupled Model. *Geophys. Res. Lett.,* https://doi.org/10.1029/2024GL111770.

Davis, L. B., D. W. J. Thompson, M. Rugenstein, and T. Birner, 2024: Links Between Internal Variability and Forced Climate Feedbacks: The Importance of Patterns of Temperature Variability and Change. *Geophys. Res. Lett.,* 51, e2024GL112774. https://doi.org/10.1029/2024GL112774.

Larson, J. G., D. W. J. Thompson, and J. W. Hurrell, 2024: Signature of the western boundary currents in local climate variability. *Nature,* https://doi.org/10.1038/s41586-024-08019-2

Wallace, J. M., D. S. Battisti, **D. W. J. Thompson**, and D. L. Hartmann, 2023: The Atmospheric General Circulation. Cambridge: Cambridge University Press. https://doi.org/10.1017/9781108563857.

Boehm, C. and **D. W. J. Thompson**, 2023: The Key Role of Cloud–Climate Coupling in Extratropical Sea Surface Temperature Variability. *J. Climate*, **36**, 2753–2762, https://doi.org/10.1175/JCLI-D-22-0362.1.

Santer, B. D., S. Po-Chedley, L. Zhao, C.-Z. Zou, Q. Fu, S. Solomon, **D. W. J. Thompson**, C. Mears and K. E. Taylor, 2023: Exceptional Stratospheric Contribution to Human Fingerprints on Atmospheric Temperature. *Proceedings of the Nat. Academy Sci.* https://doi.org/10.1073/pnas.2300758120.

van Loon, S. and **D. W. J. Thompson**, 2023: Comparing local versus hemispheric perspectives of extreme heat events, *Geophys. Res. Lett.* https://doi.org/10.1029/2023GL105246.

Davis, L. B., D. W. J. Thompson, and T. Birner, 2022: Links between climate sensitivity and the large-scale atmospheric circulation in a simple general circulation model. *J. Climate*, https://doi.org/10.1175/JCLI-D-21-0320.1.

Patrizio, C. R. and **D. W. J. Thompson**, 2022: Understanding the Role of Ocean Dynamics in Midlatitude Sea Surface Temperature Variability using a Simple Climate Model. *J. Climate*, https://doi-org/10.1175/JCLI-D-21-0184.1.

Patrizio, C. R. and **D. W. J. Thompson**, 2022: Observed Linkages Between the Atmospheric Circulation and Oceanic-Forced Sea-Surface Temperature Variability in the Western North Pacific. *Geophys. Res. Lett.,* https://doi.org/10.1029/2021GL095172.

Scaife, A., et al, 2022: Long Range Prediction and the Stratosphere. *Atmospheric Chemistry and Physics*, **22**, 2601-2623. https://doi.org/10.5194/acp-22-2601-2022.

Shah, K., S. Solomon, D. Kinnison, Q. Fu and **D. W. J. Thompson**, 2022: Phase Unlocking and the Modulation of Tropopause-Level Trace Gas Advection by the Quasibiennial Oscillation. *J. Geophysical Research*, 127, e2021JD036142. https://doi. org/10.1029/2021JD036142

Stone, K. A., S. Solomon, **D. W. J. Thompson,** D. E. Kinnison, and J. C. Fyfe, 2022: On the Southern Hemisphere Stratospheric Response to ENSO and Its Impacts on Tropospheric Circulation. *J. Climate.* https://doi.org/10.1175/JCLI-D-21-0250.1

Yook, S., D. W. J. Thompson, L. Sun, and **C. R. Patrizio**, 2022: The Simulated Atmospheric Response to Western North Pacific Sea Surface Temperature Anomalies. *J. Climate*, **35**, 3335-3352. https://doi-org/10.1175/JCLI-D-21-0371.1

Yook, W., D. W. J. Thompson, and S. Solomon, 2022: Climate impacts and potential drivers of the unprecedented Antarctic ozone holes of 2020 and 2021. *Geophys. Res. Lett.*, https://doi.org/10.1029/2022GL098064.

Boljka, L., D. W. J. Thompson, and **Y. Li**, 2021: Downstream suppression of baroclinic waves. *J. Climate*, **34**, 919-930.

Li, J., D. W. J. Thompson, 2021: Widespread changes in surface temperature persistence under climate change. *Nature* **599,** 425–430. https://doi.org/10.1038/s41586-021-03943-z

Lim, E.-P., H. H. Hendon, A. H. Butler, **D. W. J. Thompson**, et al., 2021: The 2019 Southern Hemisphere polar stratospheric warming and its impacts. *Bulletin of the AMS,* https://doi.org/10.1175/BAMS-D-20-0112.1.

Patrizio, C. R. and **D. W. J. Thompson**, 2021: Quantifying the role of ocean dynamics in mixed-layer temperature variability. *J. Climate*, **34**, 2567-2589.

Wang. P., J. Scott , S. Solomon, J. Marshall, A. R. Babbin , M. J. Lickley , **D. W. J. Thompson**, T. DeVries, Q. Liang, R. G. Prinn, 2021: On the Effects of the Ocean on Atmospheric CFC-11 Lifetimes And Emissions. *Proceedings of the Nat. Academy Sci.*, https://doi.org/10.1073/pnas.2021528118.

Zambri, B., S. Solomon, **D. W. J. Thompson**, Q. Fu, and D. Kim, 2021. Emergence of Southern Hemisphere circulation changes in response to ozone recovery. *Nature Climate Change*, https://doi.org/10.1038/s41561-021-00803-3.

Li, Y., D. W. J. Thompson, D. Olonscheck, 2020: A basic effect of cloud radiative effects on tropical sea-surface temperature variability. *J. Climate*, **33**, 4333-4346.

Albern, N., A. Voigt, **D. W. J. Thompson**, and J. G. Pinto, 2020: The role of tropical, midlatitude and polar cloud-radiative changes for the midlatitude circulation response to global warming. *J. Climate*, **33**, 7927-7943.

Yook, S., D. W. J. Thompson, S. Solomon, and S.-Y. Kim, 2020: The key role of coupled chemistry-climate interactions in tropical stratospheric temperature variability. *J. Climate*, **33**, 7619-7629.

Shah, K., S. Solomon, **D. W. J. Thompson**, and D. Kinnison, 2020: Measuring stratospheric tropical width using tracer concentrations. *J. Geophys. Res.*, **125**, e2020JD033081. https://doi.org/10.1029/2020JD033081.

Thompson, D. W. J., P. Ceppi, **Y. Li**, 2019: A robust constraint on the temperature and height of the extratropical tropopause. *J. Climate,* **32**, 273-287.

Davis, L. L. B. , D. W. J. Thompson, J. J. Kennedy, and E. C. Kent, 2019: The importance of unresolved biases in 20th century sea-surface temperature observations. *Bulletin of the AMS,* DOI:10.1175/BAMS-D-18-0104.1.

Li, Y., D. W. J. Thompson, S. Bony, and T. M. Merlis, 2019: Thermodynamic control on the poleward shift of the extratropical jet in climate change simulations. *J. Climate,* **32**, 917-934.

Taylor, P. C., R. C. Boeke, **Y. Li,** and **D. W. J. Thompson**, 2019: Arctic cloud annual cycle biases in climate models. *ACP,* **19**, 8759-8782.

Lim, Eun-Pa, H. H. Hendon, G. Boschat, D. Hudson, **D. W. J. Thompson**, A. J. Dowdy, and J. Arblaster, 2019: Australian hot and dry extremes induced by weakenings of the stratospheric polar vortex. *Nature Geoscience,* doi: 10.1038/s41561-019-0456-x.

Lim, Eun-Pa, H. H. Hendon and **D. W. J. Thompson**, 2018: On the Seasonal Evolution and Impacts of Stratosphere-Troposphere Coupling in the Southern Hemisphere. *J. Geophys. Res.,* **123**, 12,002-12,016.

Wills, S. M., and **D. W. J. Thompson**, 2018: On the observed relationships between variability in Kuroshio-Oyashio extension sea surface temperatures and the atmospheric circulation over the North Pacific. *J. Climate,* **31**, 4669-4681.

He, Shengping, E. M. Knudsen, **D. W. J. Thompson**, and Tore Furevik, 2018: Evidence for predictive skill due to midsummer Arctic sea-ice extent. *Geophys. Res. Lett.,* **45**, 9114-9122.

Maycock, A. C., et al., 2018: Revisiting the mystery of recent stratospheric temperature trends. *Geophys. Res. Lett.,*, **45**, 9919-9933.

Marshall, G. J., **D. W. J. Thompson**, and M. van den Broeke, 2017: The signature of Southern Hemisphere atmospheric circulation patterns in Antarctic precipitation. *Geophys. Res. Lett.*, **44**, https://doi.org/10.1002/2017GL075998.

Li, J., D. W. J. Thompson, E. A. Barnes, and S. Solomon, 2017: Quantifying the lead time required for a linear trend to emerge from natural climate variability. *J. Climate,* **30**, 10179-10191.

Thompson, D. W. J., S. Bony, and **Y. Li,** 2017: A thermodynamic constraint on the global tropopause and large-scale extratropical dynamics. *Proceedings of the Nat. Academy Sci.*, **114**, 8181-8186.

Thompson, D. W. J. , B. R. Crow, and E. A. Barnes, 2017: Intraseasonal periodicity in the Southern Hemisphere circulation on regional spatial scales. *J. Atmos. Sci.,* **74**, 865-877.

Li, Y., D. W. J. Thompson, Y. Huang, 2017: The influence of atmospheric cloud radiative effects on the large-scale stratospheric circulation. *J. Climate,* **30**, 5621-5635.

Gerber, E. P. and **D. W. J. Thompson**, 2017: What makes and annular mode "annular"? *J. Atmos. Sci.* **74**, 317-332.

Ivy, D. J., C. Hilgenbrink, D. Kinnison, R. A. Plumb, A. Sheshadri, S. Solomon, **D. W. J. Thompson**, 2017: Observed Changes in the Southern Hemispheric Circulation in May. *J. Climate*, **30**, 527-536.

Ivy, D. J., S. Solomon, N. Calvo, **D. W. J. Thompson**, 2017: Observed Connections of Arctic Stratospheric ozone extremes to Northern Hemisphere surface climate. *Environmental Research Letters,* **12**, doi:10.1088/1748-9326/aa57a4.

Li, Y. and **D. W. J. Thompson**, 2016: Observed signatures of the barotropic and baroclinic annular modes in cloud vertical structure and cloud radiative effects. *J. Climate,* **29**, 4723-4740.

Wills, S. M., D. W. J. Thompson, and L. M. Ciasto, 2016: On the Observed Relationships between Variability in Sea Surface Temperatures and the Atmospheric Circulation in the North Atlantic. *J. Climate*, **29**, 3719-3730.

Seidel, D. J., J. Li, C. Mears, I. Moradi, J. Nash, W. J. Randel, R. Saunders, **D. W. J. Thompson**, C.-Z. Zou, 2016: Stratospheric Temperature Changes during the Satellite Era. *J. Geophys. Res. Atmos.*, **121**, doi:10.1002/2015JD024039.

Marshall, G. J., and **D. W. J. Thompson**, 2016: The signatures of large-scale patterns of atmospheric variability in Antarctic surface temperatures. *J. Geophysical Res.*, **121**, doi:10.1002/2015JD024665.

Li, Y., D. W. J. Thompson, and S. Bony, 2015: The influence of atmospheric cloud radiative effects on the large-scale atmospheric circulation. *J. Climate*, **28**, 7263-7278.

Thompson, D. W. J., E. A. Barnes, C. Deser, **W. E. Foust,** and A. S. Phillips, 2015: Quantifying the role of internal climate variability in future climate trends. *J. Climate,* **28**, 6443-6456.

Thompson, D. W. J., and **Y. Li**, 2015: Baroclinic and barotropic annular variability in the Northern Hemisphere. *J. Atmos. Sci.,* **72**, 1117-1136.

Thompson, D. W. J., and E. A. Barnes, 2014: Periodic variability in the large-scale Southern Hemisphere atmospheric circulation. *Science*, **343**, 641-645.

Thompson, D. W. J., and **J. D. Woodworth**, 2014: Barotropic and baroclinic annular variability in the Southern Hemisphere. *J. Atmos. Sci.,* **71**, 1480-1493.

Barnes, E. A., and **D. W. J. Thompson**, 2014: Comparing the roles of barotropic versus baroclinic feedbacks in the atmosphere's response to mechanical forcing. *J. Atmos. Sci.*, **71**, 177-194.

Li, Y., D. W. J. Thompson, G. L. Stephens, and S. Bony 2014: A global survey of the linkages between cloud vertical structure and large-scale climate *J. Geophys. Res*., **119**, doi:10.1002/2013JD020669.

Li, Y., D. W. J. Thompson, Y. Huang, and M. Zhang, 2014: Observed Linkages between the Northern Annular Mode/North Atlantic Oscillation, Cloud Incidence, and Cloud Radiative Forcing. *Geophys. Res. Lett.,* **41***,* 1681-1688, doi:10.1002/2013GL059113.

Ivy, D. J., S. Solomon, and **D. W. J. Thompson**, 2014: On the Identification of the Downward Propagation of Arctic Stratospheric Climate Change over Recent Decades. *J. Climate*, **27**, 2789-2799.

Bandoro, J., S. Solomon, A. Donahue, **D. W. J. Thompson**, and B. D. Santer, 2014: Influences of the Antarctic Ozone Hole on Southern Hemispheric Summer Climate Change. *J. Climate*, **27**, 6245-6264.

Grise, K. M., and **D. W. J. Thompson**, 2013: On the signatures of equatorial and extratropical wave forcing in tropical tropopause layer temperatures. *J. Atmos. Sci.*, **69**, 857-874.

Li, Y., and **D. W. J. Thompson**, 2013: The signature of the stratospheric Brewer-Dobson circulation in tropospheric clouds. *J. Geophys. Res.*, **118**, 3486-3494.

Birner, T., **D. W. J. Thompson**, and T. G. Shepherd, 2013: Up-gradient eddy fluxes of potential vorticity near the subtropical jet. *Geophys. Res. Lett.,* **40**, 5988-5993. doi:10.1002/2013GL057728.

Grise, K. M., and **D. W. J. Thompson**, 2012: Equatorial Planetary Waves and Their Signature in Atmospheric Variability. *J. Atmos. Sci.*, **69,** 857-874.

Simpkins, G. R., L. M. Ciasto, M. H. England, and **D. W. J. Thompson**, 2012: Observed Relationships Between Large-Scale Climate Variability and Antarctic Sea Ice Concentration. *J. Climate,* **25**, 5451-5469.

Thompson, D. W. J., and T. Birner, 2012: On the linkages between the tropospheric isentropic slope and eddy fluxes of heat during Northern Hemisphere winter. *J. Atmos. Sci.*, **69***,* 1811-1823.

Thompson, D. W. J., D. J. Seidel, W. J. Randel, C.-Z. Zou, A. H. Butler, C. Mears, A. Osso,, C. Long, R. Lin, 2012: The mystery of recent stratospheric temperature trends. *Nature*. **491**, 692-697

Roff, G., **D. W. J. Thompson**, and H. H. Hendon, 2011: Does increasing model stratospheric resolution improve extended-range forecast skill? *Geophys. Res. Lett.*, 38, L05809, doi:10.1029/ 2010GL046515.

Thompson, D. W. J., S. Solomon, P. J. Kushner, M. H. England, **K. M. Grise**, and D. J. Karoly, 2011: Signatures of the Antarctic ozone hole in Southern Hemisphere surface climate change. *Nature Geosciences,* doi:10.1038/ngeo1296.

Butler, A. H., D. W. J. Thompson, and T. Birner, 2011: Isentropic slopes, down-gradient eddy fluxes, and the extratropical atmospheric circulation response to tropical tropospheric heating. *J. Atmos. Sci.,* **68**, 2282-2305.

Kidston, J., A. S. Taschetto, **D. W. J. Thompson**, and M. H. England, 2011: The Influence of Southern Hemisphere Sea Ice Extent on the Latitude of the Mid-Latitude Jet Stream. *Geophys. Res. Lett.*, **38**, L15804, doi:10.1029/2011GL048056.

Young, P. J., S. Solomon, **D. W. J. Thompson**, K. H. Rosenlof, and J. -F. Lamarque, 2011: The seasonal cycle and interannual variability in stratospheric temperatures and links to the Brewer-Dobson circulation: An analysis of MSU and SSU data, 1979-2005. *J. Climate,* **24***,* 6243-6358.

Verlinden, K. L., D. W. J. Thompson, and G. L. Stephens, 2011: The three-dimensional distribution of clouds over the Southern Hemisphere high latitudes. *J. Climate*, **24***,* 5799-5811.

Grise, K., D. W. J. Thompson, and T. Birner, 2010: A Global Survey of Static Stability in the Stratosphere and Upper Troposphere. *J. Climate,* **23***, 2275-2292.*

Butler, A. H., D. W. J. Thompson, and R. Heikes, 2010: The steady-state atmospheric circulation response to climate change-like thermal forcings in a simple general circulation model. *J. Climate,* **23**, 3474-3496.

Fyfe, J. C., N. P. Gillett, and **D. W. J. Thompson**, 2010: Comparing variability and trends in observed and modeled global-mean surface temperature. *Geophys. Res. Lett.*, **37**, L16802, doi:10.1029/2010GL044255.

Thompson, D. W. J., J. M. Wallace J. Kennedy, and P. D. Jones, 2010: An abrupt drop in Northern Hemisphere sea surface temperature around 1970. *Nature*, **467**, 444-447.

Randel, W. J., et al., 2009: An update of observed stratospheric temperature trends, *J. Geophys. Res.,* 114, D02107, doi:10.1029/2008JD010421.

Ciasto, L. M. and **D. W. J. Thompson**, 2009: Observational evidence of reemergence in the extratropical Southern Hemisphere. *J. Climate*, **22**, 1446-1453.

Thompson, D. W. J. and S. Solomon, 2009: Understanding Recent Stratospheric Climate Change. *J. Climate*, **22**, 1934-1943.

Grise, K., D. W. J. Thompson, and P. Forster, 2009: On the role of radiative processes in stratosphere/troposphere coupling. *J. Climate*, **22**, 4154-4161.

Thompson, D. W. J., J. M. Wallace P. D Jones, and J. Kennedy, 2009: Identifying signatures of natural climate variability in time series of global-mean surface temperature: Methodology and Insights. *J. Climate*, **22**, 6120-6141.

Baldwin, M.P., and **D. W. J. Thompson**, 2009: A critical comparison of stratosphere-troposphere coupling indices, *Q. J. R. Meteorol. Soc.,* **135**, 1661-1672.

Austin, J. et al., 2009: Coupled chemistry climate model simulations of stratospheric temperatures and their trends for the recent past. *Geophys. Res. Lett.,* **36**, L13809, doi:10.1029/2009GL038462.

Ciasto, L. M. and **D. W. J. Thompson**, 2008: Observations of large-scale atmosphere-ocean interaction in the Southern Hemisphere. *J. Climate*, **21**, 1244-1259.

Thompson, D. W. J., J. Kennedy, J. M. Wallace and P. D Jones, 2008: A large discontinuity in the mid-20th century in observed global-mean surface temperature. *Nature*, **453** doi:10.1038/ nature06982.

Solomon, S., R. W. Portmann, and **D. W. J. Thompson** 2007: Contrasts between Antarctic and Arctic Ozone Depletion. *Proc. Nat. Academy of Sciences*, **104**, 445-449.

Hendon, H. H., **D. W. J. Thompson**, and M. C. Wheeler 2007: Australian rainfall and surface temperature variations associated with the Southern Hemisphere annular mode. *J. Climate*, **20**, 2452-2467.

Butler, A. H., D. W. J. Thompson, K. R. Gurney, 2007: Observed relationships between the southern annular mode and atmospheric carbon dioxide. *Global Bio. Cycles,**21,*** GB4014, doi:10.1029/2006GB002796.

Forster, P. M., G. Bodeker, R. Schofield, S. Solomon, **D. W. J. Thompson**, 2007: Effects of ozone cooling in the tropical lower stratosphere and upper troposphere. *Geophys. Res. Lett.*, **34**, L23813, doi:10.1029/2007GL031994..

Keeley, S. P. E., N. P. Gillett, **D. W. J. Thompson**, S. Solomon, and P. M. de F. Forster, 2007: Is Antarctic Climate Most Sensitive to Ozone Depletion in the Mid or Lower Stratosphere? *Geophys. Res. Lett.,* **34**, L22812, doi:10.1029/2007GL031238.

L'Heureux, M. L., and **D. W. J. Thompson** 2006: Observed relationships between the El-Nino/ Southern Oscillation and the extratropical zonal-mean circulation. *J. Climate*, **19**, 276-287.

Solomon, S., R. W. Portmann, T. Sasaki, D. J. Hofman, and **D. W. J. Thompson** 2006: Four decades of ozonesonde measurements over Antarctica. *J. Geophys. Res.*, **110**, D21311, doi:10.1029/2005JD005917.

Thompson, D. W. J., J. C. Furtado and T. S. Shepherd 2006: On The Tropospheric Response to Anomalous Stratospheric Wave Drag and Radiative Heating. *J. Atmos. Sci*., **63**, 2616-2629.

Thompson, D. W. J., M. P. Baldwin, and S. Solomon, 2005: Stratosphere-troposphere coupling in the Southern Hemisphere. *J. Atmos. Sci.*, **62**, 708-715.

Hall, A., A. Clement, **D. W. J. Thompson**, A. Broccoli, C. Jackson, 2005: The importance of atmospheric dynamics in the Northern Hemisphere wintertime climate response to changes in the Earth's orbit. *J. Climate*, **18**, 1315-1325.

Limpasuvan, V., **D. W. J. Thompson**, and D. L. Hartmann, 2005: Reply. *J. Climate*, **18**, 2778-2780.

Thompson, D. W. J., and S. Solomon, 2005: Recent stratospheric climate trends as evidenced in radiosonde data: Global structure and tropospheric linkages. *J. Climate*, **18**, 4785-4795.

Limpasuvan, V., D. L. Hartmann, **D. W. J. Thompson**, K. Jeev, and Y. L. Yung 2005: Stratosphere-troposphere evolution during polar vortex intensification. *J. Geophys. Res.*, **110**, D24101, doi:10.1029/2005JD006302.

Solomon, S., **D. W. J. Thompson**, R. W. Portmann, S. J. Oltmans, and A. M. Thompson 2005: On the distribution and variability of ozone in the tropical upper troposphere: Implications for tropical deep convection and chemical-dynamical coupling. *Geophys. Res. Lett.*, 32, L23813, 10.1029/2005GL024323

Ciasto, L., and **D. W. J. Thompson**, 2004: North Atlantic atmosphere/ocean interaction on intraseasonal timescales. *J. Climate*, **17**, 1617-1621.

Limpasuvan, V., **D. W. J. Thompson**, and D. L. Hartmann 2004: On the lifecycle of sudden stratospheric warmings. *J. Climate*, **17**, 2584-2596.

Thompson, D. W. J., and D. J. Lorenz, 2004: The signature of the annular modes in the tropical troposphere. *J. Climate*, **17**, 4330-4342.

Thompson, D. W. J., S. Lee, and M. P. Baldwin, 2003: The Northern Hemisphere annular mode/ North Atlantic Oscillation: Atmospheric Processes. *AGU Monograph on the North Atlantic Oscillation*. AGU Geophysical Monograph **134**, 81-112.

Baldwin, M. P., D. B. Stephenson, **D. W. J. Thompson**, T. J. Dunkerton, A. J. Charlton, and A. O'Neill, 2003: Stratospheric memory and skill of extended-range weather forecasts. *Science*, **301**, 636-640.

Gillett, N, and **D. W. J. Thompson**, 2003: Simulation of recent Southern Hemisphere climate change. *Science*, **302**, 273-275.

Wallace, J. M., and **D. W. J. Thompson**, 2002: Annular Modes and Climate Prediction? *Physics Today*, **55**, 28-33.

Thompson, D. W. J., M. P. Baldwin, and J. M. Wallace, 2002: Stratospheric connection to Northern Hemisphere wintertime weather: implications for prediction. *J. Climate*, **15**, 1421-1428.

Wallace, J. M., and **D. W. J. Thompson**, 2002: The Pacific Center of Action of the Northern Hemisphere Annular Mode: Real or Artifact? *J. Climate*, **15**, 1987-1991.

Thompson, D. W. J., and S. Solomon, 2002: Interpretation of recent Southern Hemisphere climate change. *Science*, **296**, 895-899.

Thompson, D. W. J. and J. M. Wallace, 2001: Regional climate impacts of the Northern Hemisphere annular mode. *Science*, **293**, 85-89.

Thompson, D. W. J. and J. M. Wallace, 2000: Annular modes in the extratropical circulation. Part I: Month-to-month variability. *J. Climate*, **13**, 1000-1016.

Thompson, D. W. J., J. M. Wallace, and G. C. Hegerl, 2000: Annular modes in the extratropical circulation. Part II: Trends. *J. Climate*, **13**, 1018-1036.

Wallace, J. M., **D. W. J. Thompson**, and Z. Fang, 2000: Comments on "Northern Hemisphere teleconnection patterns during extreme phases of the zonal-mean circulation". *J. Climate*, **13**, 1037-1039.

Hartmann, D. L., J. M. Wallace, V. Limpasuvan, **D. W. J. Thompson**, and J. R. Holton, 2000: Can ozone depletion and global warming interact to produce rapid climate change? *Proc. of the Nat. Acad. of Sci.*, **97**, 1412-1417.

Thompson, D. W. J. and J. M. Wallace, 1998: The Arctic Oscillation signature in the wintertime geopotential height and temperature fields. *Geophys. Res. Lett.*, **25**, 1297-1300.

ASSESSMENTS / REPORTS (refereed)

Forster, P. M., and **D. W. J. Thompson** (Coordinating Lead Authors), et al., 2011: Stratospheric changes and climate, Chapter 4 in Scientific Assessment of Ozone Depletion: 2010, Global Ozone Research and Monitoring Project-Report No. 52, 516 pp., World Meteorological Organization, Geneva, Switzerland.

National Research Council. Abrupt Impacts of Climate Change: Anticipating Surprises. Washington, DC: *The National Academies Press*, 2013.

OTHER PUBLICATIONS

Santer, B. D., S. Solomon , **D. W. J. Thompson**, Q. Fu , and Y. Li, 2025: Reply to Fleming: Not a Gossamer Web.. *PNAS*. July 4, 2025.

Santer, B. D., S. Solomon , **D. W. J. Thompson**, Q. Fu , and Y. Li, 2025: A Thought Experiment Reveals the Fingerprints of Climate Change Came Early. *Scientific American*. July 4, 2025.

Lim, E. - P., et al., 2020: The 2019 Antarctic sudden stratospheric warming. *January 2020 SPARC Newsletter*.

Hendon, H. H., D. W. J. Thompson, et al., 2019: Rare forecasted climate event under way in the Southern Hemisphere. *Nature,* **573**, 495.

Serra, Y. L., et al., 2018: The risks of contracting the acquisition and processing of the nation's weather and climate data to the private sector. *Bulletin of the American Meteorological Society.* **99**, 869–870.

Wallace, J.M., Thompson, D. W. J., Beresford, P., 2015. Overview. In: Gerald R. North (editor-in-chief), John Pyle and Fuqing Zhang (editors). Encyclopedia of Atmospheric Sciences, 2nd edition, Vol 3, pp. 33–42.

Wallace, J. M., I. M. Held, D. W. J. Thompson, K. E. Trenberth, and J. E. Walsh, 2014: Global Warming and Winter Weather, *Science*, **14**, 729-730.

Renwick, J. and D. W. J. Thompson, 2006: The Southern Annular Mode and New Zealand climate. *Water and Atmosphere (New Zealand).*

Baldwin, M. P., D. W.J. Thompson, E. F. Shuckburgh, W. A. Norton, N. P. Gillett, 2003: Weather from the stratosphere? *Science*, **301**, 317-319.

AWARDS / HONORS

Fellow, American Meteorological Society
Fellow, American Geophysical Union
Royal Society (UK) Wolfson Fellowship Award (2022)
Selection for Geophysical Research Letters 40th Anniversary Collection (2014)
Meisinger Award, American Meteorological Society (2008)
Popular Science Brilliant 10 (2006)
Monfort Professorship, Colorado State University (2006-2008)
Abell Outstanding Early-Career Faculty Award, Colorado State University (2006)
Charney Lecturer, American Geophysical Union (2005)
James B. Macelwane Medal, American Geophysical Union (2004)
NOAA OAR Outstanding Scientific Paper Award (2003)
National Science Foundation, Faculty Early Career Development (CAREER) (2001)
NASA Earth System Science Fellowship (1999)

TEACHING / MENTORING

Current group:

Ying-Ju Chen (Ph. D.)
Leif Fredericks (Ph. D.; co-advised with M. Rugenstein)
Mayumi Liz de Andrade Miyazato (M. S.)
Jesse Robinett (M. S.)
Luke Davis (Postdoctoral scientist; at UEA)

Completed degrees (primary thesis advisor):

Chloe Boehm (M. S. 2022; Ph. D. 2025); Leif Fredericks (M. S. 2025); Simchan Yook (Ph. D. 2023); Luke Davis (M.S. 2019; Ph. D. 2023); James Larson (M. S. 2023; co-advised with J. Hurrell); Casey Patrizio (M. S. 2017; Ph. D. 2021; co-advised with D. Randall); Jingyuan Li (M. S. 2017; Ph. D. 2020); Samantha Wills (M. S. 2015; Ph. D. 2018); Brian Crow (M. S. 2016); Eliott Foust (M. S. 2014); Jonathan Woodworth (M. S. 2013); Kevin Grise (M. S. 2007; Ph. D. 2011); Kate Mullen (M. S. 2011); Amy Butler (M. S. 2005; Ph. D. 2009); Katie Argo (M. S. 2009); Laura Ciasto (M. S. 2004; Ph. D. 2008); Jason Furtado (M. S. 2005); Michelle L'Heureux (M. S. 2004; co-advised with D. Randall); Anthony Worsham (M. S. 2002)

Postdoctoral/research scientists

Ying Li (Ph. D. GFDL/Princeton; postdoctoral scientist 2011-2014; research scientist 2014-2020)

Lina Boljka (Ph. D. Univ. Reading; postdoctoral scientist 2018-2020)

Graduate student committees, member (external to CSU):

Peidong Wang (MIT; Ph. D. 2025) (committee member)
Kasturi Sanjiv Shaw (MIT; Ph. D. 2022) (committee member)
Rishav Goyal (UNSW, Sydney AU; external examiner Ph. D. 2021)
Tammas Loughran (UNSW, Sydney AU; external examiner Ph. D. 2019)
Kevin DallaSanta (NYU; external committee member Ph. D. 2019)
Nicholas Byrne (University of Reading, Ph. D. 2017) (external examiner)
Claudio Saffioti (ETH, Zurich; Ph. D. 2016) (external committee member)
Albert Osso (Univ. of Barcelona; Ph. D. 2014) (committee president)
Ying Li (Princeton University/GFDL; Ph.D. 2011) (reading committee)
Cegeon Chan (MIT; Ph. D. 2009) (committee member)
Ivar Seierstad (University of Bergen; Ph.D. 2008) (thesis opponent)

Graduate student committees, member (CSU):

Sabrina Cohen (Ph. D.); Killian McSweeney (M.S.); Ben Toms (Ph. D. 2020); Bryn Ronalds (Ph. D. 2020); Matthew Nicki (Ph. D.; Chemistry); Stephanie Henderson (M. S. 2012; Ph. D. 2017); Robert Anthony (Ph. D. 2016; Earth Sciences); Nick Davis (M. S. 2013); Jeremiah Sjoberg (Ph. D. 2014); David Duncan (M. S. 2013); Kate Musgrave (Ph.D. 2011); Levi Silvers (M. S. 2006; Ph.D. 2011); Todd Jones (M. S. 2010); Yohei Takano (M. S. 2011); James Benedict (M.S. 2005; Ph.D. 2009); Dan Lindsey (Ph. D. 2008); Josh Horstman (M. S. 2008; Department of Statistics); Paul Quelet (M.S. 2006); Christopher Castro (Ph.D. 2005); Christiana Stan (Ph.D. 2005); Maike Ahlgrimm (M. S. 2004); Russ Schumacher (M.S. 2004); Eric Gilleland (Ph. D. 2004; Department of Statistics); Wesley Terwey (M.S. 2003); Philip Klotzbach (M.S. 2002)

Classes taught:

AT601: Atmospheric Dynamics I (graduate level introduction to GFD)
(2019, 2022, 2024)
AT602: Atmospheric Dynamics II (graduate level advanced GFD)
(2013-2015, 2018, 2023)
AT606: Introduction to Climate (graduate level)
(2005, 2015, 2017, 2019, 2021, 2024, 2025)
AT655: Objective Analysis in the Atmospheric Sciences (graduate level)
(2002-2005, 2007, 2009-2012)
AT750: Analysis and Diagnosis of Climate Variability (graduate level)
(2002, 2004, 2006, 2008, 2011, 2012, 2016, 2020, 2023)
AT350: Weather and Climate (undergraduate)
(2001, 2003, 2005, 2009, 2011, 2012, 2013, 2018)
Short course in large-scale dynamics: University of Bergen, Norway June 2009.

Other:

Nicole Albern (visiting scholar from KIT Germany)
Erlend Knudsen (visiting Fullbright scholar from Univ. of Bergen)
Claudette Ojo (undergraduate CMMAP summer internship)
Teaching Assistant, UW, Climate (ATMS211, 1996)
Teaching Assistant, UW, Weather (ATMS101, 1997)
Department Lead Teaching Assistant, UW, 1996-1998
Seattle Public School: Served as a Science Resource Teacher on five occasions, 1997-1999.

SERVICE

National/International

- WMO Scientific Assessment of Ozone Depletion 2022 (Coauthor)
- WMO Scientific Assessment of Ozone Depletion 2014 (Chapter Editor)
- WMO Panel on "Climate impacts of ozone depletion/recovery" (2012).
- WMO Scientific Assessment of Ozone Depletion 2010 (Coordinating Lead Author)
- WMO Scientific Assessment of Ozone Depletion 2006 (Coauthor)
- WMO Scientific Assessment of Ozone Depletion 2002 (Reviewer at Les Diablerets)
- WMO SPARC Committee on Stratospheric Temperature Trends (Co-Chair: 2011-2015)
- WMO SPARC Committee on Stratospheric Temperature Trends (Member: 2005-2010)

- AMS Syukuro Manabe Climate Research Award Committee 2020-
- AMS Climate Variability and Change Committee (2011-2014).
- AMS Middle Atmosphere Committee (2004-2009).
- AMS: Associate Editor, Journal of Climate (2004-2019).
- AMS: Associate Editor, Journal of Atmospheric Science (2009-).
- AMS: Guest Editor: Journal of Atmospheric Sciences special issue on Jets (2006).

- Bjerknes Centre: Scientific Advisory Committee, Bergen, Norway (2011-2016)
- Bjerknes Centre: Faculty Search Committee, Bergen, Norway (2011)
- SHARP/German science foundation: Review panel. Berlin, Germany (February 2012).
- CLIVAR/CLiC/SCAR International CLIVAR Southern Ocean Panel (2005-2014).
- WCRP/CLiC Arctic Climate Panel (2004-2006).
- National Science Foundation Arctic System Science: Science Steering Committee, Ocean-Atmosphere-Ice Interactions, (2002-2004).
- IPCC: Lessons Learnt for Climate Change Research and WCRP. Bern, Switzerland (9/2014).
- NRC (National Research Council), Committee on Understanding and Monitory on Abrupt Climate Change.
- National Academies Workshop on Climate Data Records. Washington, D.C. 8/2003.
- Award committees: Multiple nomination and supporting letters for successful: AGU fellow cases; AMS Meisinger award; AGU Holton award.
- University of Miami: Reviewer, F. G. Walton Smith Prize.
- NOAA: CLIVAR Atlantic Review Panel.
- NASA: Panel Review 2024.

- Co-organizer: Stormtracks workshop. Oleron, France, May 2022.
- Co-convener: Session "Stratosphere/troposphere/hydrosphere/cryosphere coupling" at the 2013 Davos Atmosphere and Cryosphere Assembly. Davos, Switzerland 2013.
- Organizing committee: The role of the stratosphere on surface climate. Buenos Aires, Argentina, November 2012.
- Organizer (with Gabriel Lau): Wallace Symposium, Seattle, WA., Sept. 2010.
- Program committee: Geophysical Institute conference on polar dynamics. Bergen, Norway 2007.
- Convener (with M. Baldwin and E. Shuckburgh): AGU Chapman conference on stratosphere/troposphere coupling. Santorini, Greece, Sept. 2007.
- Organizing committee: AGU Chapman conference on geophysical jets. Savannah, Ga. 2006.
- Convener: Session MI05 "Large scale patterns of atmospheric variability" at the 2003 IAMAS-IUGG General Assembly, Sapporo, Japan.
- Co-organizer: "The Role of the Stratosphere in Tropospheric Climate", Whistler, Canada, April 29- May 2, 2003.
- Co-convener of Session A08: "The Arctic Oscillation" at the 1999 AGU fall meeting, San Francisco, Ca. Session included 24 oral presentations and 12 poster presentations.

- Reviewer: J. Climate, J. Atmos. Sciences, Nature, Science, JGR, GRL, JMSJ, Climate Dynamics, Int. J. of Climatology, QJRMS, WMO Scientific Assessment of Ozone Depletion, IPCC: AR3, AR4, AR5, IPCC: Ozone and Climate, NASA, NOAA, NSF, Dyn. of Atmospheres and Oceans.

Colorado State University

- WSCOE Faculty Awards Committee (2025-current)
- Herbert Riehl/Alumni award committee (2001-3, 2021-current)
- External awards nominating committee (2021-current)
- Department Graduate Committee (2004-10; 2017; 2021-2022)
- Chair of the faculty search committee (2019)
- Faculty search committee (2002, 2005, 2006, 2011, 2012, 2016)
- Chair of the promotion/tenure committee (2013)
- Executive Council for the School of Global Environmental Sustainability (2012-2022)
- Committee on Responsibilities and Standing of Academic Faculty (College of Engineering representative) (2013-2015)
- Voting member: College Curriculum Committee (2008-2013)
- Chair of the curriculum committee (2008-2013)
- Department Web Committee (2008-2010)
- New student counselor (2005-7)
- Graduate Student Recruiting Committee (2006-7)
- ATS Department Head search committee (2006)
- Policy and Procedures Committee (2004-5)
- Colloquium coordinator (2001-7)
- Department Code Committee (2004-5; 2017)
- Qualifying exam committee (2001-4)
- 40th anniversary organizing committee (2002)

PRESENTATIONS (CONFERENCES)

American Geophysical Union Fall meeting, San Francisco, CA 12/1997
Atm. Circulation Related to Oscillations in Sea-Ice and Salinity, Reykjavik, Iceland 3/1998
Geophysical Fluid Dynamics Laboratory consortium meeting, Princeton, NJ 7/1998
NASA Workshop on Decadal Variability, Williamsburg, Va. 9/1998
North Pacific Marine Science Organization annual meeting, Fairbanks, Al. 10/1998 (invited)
NOAA Climate Diagnostics Workshop, Miami, Fla. 10/1998
American Fisheries Society annual meeting, Vancouver, Canada 2/1999 (invited)
The Study of Environmental Arctic Change meeting, Seattle, Wa. 6/1999 (invited)
Geophysical Fluid Dynamics Laboratory consortium meeting, Boulder, CO. 7/1999
Commission on Geosciences, Env., and Resources meeting, Ottawa, Canada 7/1999 (invited)
NOAA Climate Diagnostics Workshop, Tucson, AZ. 11/1999
Goddard Institute for Space Studies Climate Workshop, New York, NY 11/1999 (invited)
American Meteorological Society 6th International Conference on Southern Hemisphere Meteorology and Oceanography, Santiago, Chile 4/2000
NOAA Program in Climate and Global Change Summer Institute, Steamboat Spr., CO. 6/2000 (invited)
Royal Meteorological Society 150th Anniversary Conference, Cambridge, UK 7/2000
Geophysical Fluid Dynamics Laboratory consortium meeting, Princeton, NJ 9/2000
AGU Chapman Conference on the NAO, Orense, Spain 11/2000 (invited)
American Geophysical Union Fall meeting, San Francisco, CA 12/2000
Joint Japan-US Workshop: Coupling of the troposphere and stratosphere by dynamical, radiative and chemical processes, Kyoto, Japan 3/2001 (invited)
European Geophysical Society General Assembly, Nice, France 3/2001
US CLIVAR Atlantic Meeting, Boulder, CO. 6/2001

Third Study Conference on BALTEX, Mariehamn, Finland 7/2001 (invited)
8th Scientific Assembly of the International Association of Meteorology and Atmospheric Sciences, Innsbruck, Austria 7/2001
131st Annual Meeting of the American Fisheries Society, Phoenix, AZ 8/2001 (invited)
CLIVAR Workshop on the Southern Ocean, Lamont-Doherty Earth Observatory, Palisades, NY. 10/2001 (invited)
NOAA Climate Diagnostics Workshop, La Jolla, CA. 10/2001
American Geophysical Union Fall meeting, San Francisco, CA 12/2001
36th Congress of the Canadian Meteorological and Oceanographic Society, Rimouski, Canada 5/2002 (invited)
Colorado State University, Department of Atmospheric Science 40th Anniversary, Ft. Collins, CO 7/2002
Bjerknes Centre for Climate Research, Workshop on High Latitude Climate, Bergen, Norway 9/2002 (invited)
Bermuda Biological Station for Research/RPI, Workshop on Climate Predictability, Bermuda 10/2002 (invited)
WOCE and Beyond: Achievements of the World Ocean Circulation Experiment. San Antonio, TX 11/2002 (invited)
American Geophysical Union Fall meeting, San Francisco, CA 12/2002 (invited).
Canadian Middle Atmosphere Modelling/Global Chemistry for Climate Annual Workshop, Toronto, Canada 12/2002 (invited)
The Role of the Stratosphere in Tropospheric Climate, Whistler, Canada 4/2003.
IUGG 2003 General Assembly, Sapporo, Japan 7/2003.
EURESCO Conference on Achieving Climate Predictability from Paleoclimatic Data, San Feliu, Spain 10/2003 (invited)
Climate Change in High Latitudes, Bjerknes Centenary, Bergen, Norway 9/2004 (invited).
SORCE Science Meeting: Decadal variability in the Sun and Climate, Meredith, New Hampshire 10/2004 (invited)
CSU Colloquium on Environmental Research, Fort Collins, CO 11/2004 (invited).
Workshop on High Latitude Climate Change, Fairbanks, AK 12/2004 (invited).
American Geophysical Union Fall meeting, San Francisco, CA 12/2004
Gordon Research Conference on Polar Marine Science, Ventura, CA 3/2005 (invited).
Climate and Cryosphere (CLiC) Science Conference, Beijing, China 4/2005 (invited).
American Geophysical Union Spring meeting, New Orleans, LA 5/2005 (invited).
American Meteorological Society, Middle Atmosphere Meeting, Cambridge, MA 6/2005 (invited).
CLIVAR Modes of SH Climate Variability Workshop, Cambridge, UK 6/2005 (invited).
Focus group on abrupt climate change (Changeling), La Jolla, CA 3/2006 (invited).
Climate and Cryosphere (CLiC) SSG, Boulder, CO. 12/2006.
AMOS meeting on the SAM, Adelaide, Australia 2/2007 (invited).
AMS Middle Atmosphere Meeting, Portland, OR. 8/2007.
Chapman Conference on Stratosphere/Troposphere coupling, Santorini, Greece 9/2007.
Antarctic Peninsula Climate Change, Irvine, CA 6/2008 (invited).
SPARC General Assembly, Bologna, Italy 8/2008 (invited).
American Geophysical Union Fall meeting, San Francisco, CA 12/2008
American Meteorological Society International Conference on Southern Hemisphere Meteorology and Oceanography, Melbourne, Australia 2/2009
CLIVAR Southern Ocean Panel Meeting, Sydney, Australia 2/2009
Advanced Climate Dynamics Course (summer school), Bergen, Norway 6/2009
International Association of Meteorology and Atmospheric Sciences, Montreal, Canada 7/2009
Wallace Symposium, Seattle, WA. 9/2010
AMS Annual Meeting, Seattle, WA. 1/2011
Swiss Climate Change Day/Swiss Academy of Sciences, Bern, Ch. 4/2011

Congress of the Canadian Meteorological and Oceanographic Society, Victoria, Canada 6/2011 (invited).
AMS AOFD meeting. Spokane, Wa. 6/2011
CLIVAR Southern Ocean Panel Meeting, Boulder, CO 10/2011
Centre for Climate Dynamics, Bergen, Norway, 12/2011
American Geophysical Union Fall meeting, San Francisco, CA 12/2011
SPARC SSG, Zurich, Ch. 2/2012
SHARP annual meeting, DLR, Munich, Germany 7/2012
3ICESM, Hamburg, Germany 9/2012 (invited)
NOAA Climate Diagnostics Workshop, Ft. Collins CO 10/2012
AGU Fall Meeting, San Francisco, CA 12/2012
CLIVAR Southern Ocean workshop, Hobart, Australia 2/2013
NCAR CVC workshop, Boulder, CO. 2/2013
NCAR Southern Ocean workshop, Boulder, CO. 5/2013
AMS AOFD meeting. Newport, RI. 6/2013
AMS Middle Atmosphere meeting. Newport, RI. 6/2013
Bjerknes Centre annual meeting, Geilo, Norway 1/2014
Australian Met. and Oceanographic Society annual meeting, Hobart, Australia 2/2014 (invited).
NCAR CVC workshop, Boulder, CO. 3/2014
AGU Fall Meeting, (Session on Large Ensembles), San Francisco, CA 12/2014
AGU Fall Meeting, (Session on Southern Ocean Clouds), San Francisco, CA 12/2014
AMS Annual Meeting, (Session on Climate Change), Phoenix, AZ 1/2015
AMS Annual Meeting, (Session on Climate Variability), Phoenix, AZ 1/2015
Bjerknes Centre annual meeting, Geilo, Norway 1/2015
SPARC Stratospheric Temperature Trends meeting, Victoria, Canada 4/2015
AMS AOFD meeting. Minneapolis, MN. 6/2015
SPARC Workshop on Stormtracks, Grindelwald, Switzerland 8/2015 (invited)
DLR Conference on Climate Change, Cologne, Germany 4/2016 (invited)
EGU annual meeting, Vienna, Austria 4/2016
PCC/UW annual workshop, San Juan Island, WA 9/2016
GFDL Model Hierarchies workshop, Princeton, NJ 11/2016
AGU Fall Meeting, San Francisco, CA 12/2016
Southern Ocean workshop, NCAR Boulder CO 4/2017
4ICESM, Hamburg, Germany 9/2017
AGU Fall Meeting, New Orleans, LA 12/2017
NCAR CVC workshop, Boulder, CO. 1/2018
AMOS/ICSHMO (Large-scale dynamics), Sydney, Australia 2/2018
AMOS/ICSHMO (Atmospheric processes), Sydney, Australia 2/2018
Craaford Symposium, Stockholm, Sweden 5/2018
Workshop on Stormtracks, Uto, Sweden 8/2018 (invited)
CFMIP conference, Boulder, CO. 10/2018
EGU annual meeting, Vienna, Austria 4/2019
Climate and Wave Dynamics Workshop, Eilat, Israel, 9/2019
CFMIP conference, Mykonos, Greece 10/2019
AGU Fall Meeting, San Francisco, CA 12/2019
AMS Annual Meeting, Boston MA 1/2020
EGU annual meeting, Vienna, Austria (delivered remotely) 5/2022
Workshop on Stormtracks, Oleron, France 6/2022
UK Climate Dynamics Workshop, Norwich, UK 6/2022
From Spectroscopy to Climate Workshop. Princeton, NJ. 8/2022
Hendon retirement symposium (delivered remotely) 2/2023
EGU annual meeting, Vienna, Austria 5/2023
CFMIP conference, Boston, MA 6/2024
AGU Fall Meeting, Washington, DC 12/2024

EGU annual meeting, Vienna, Austria 5/2025
Workshop on Stormtracks, Rosendal, Norway 6/2025

SEMINARS

University of Washington, Department of Atmospheric Sciences 5/1997
University of Washington, Department of Atmospheric Sciences 1/1998
National Center for Atmospheric Research, Boulder, Co. 10/1998
University of Washington, Climate Impacts Group 11/1998, 10/1999
Canadian Climate Modeling Centre, Victoria, Canada 12/1998
University of Reading, Department of Meteorology, Reading UK 1/1999
University of Washington, Department of Atmospheric Sciences 3/1999
Northwest Research Associates, Bellevue, Wa. 3/1999
Scripps Institute for Oceanography, La Jolla, Ca. 11/1999
University of Washington, Department of Physical Oceanography 1/2000
University of Washington, Department of Atmospheric Sciences 1/2000
Texas A&M University, Department of Oceanography 2/2000
California Institute of Technology, Division of Geological and Planetary Sciences 2/2000
Lamont Doherty Earth Observatory, Palisades, NY 2/2000
NASA Goddard Institute for Space Studies, New York, NY 2/2000
University of Alaska, Natural Sciences, Fairbanks, AK 3/2000
International Arctic Research Center, Fairbanks, AK 3/2000
Colorado State University, Department of Atmospheric Sciences 3/2000
University of California at Los Angeles, Department of Atmospheric Sciences 5/2000
Massachusetts Institute of Technology, Dep't. of Earth, Atm., and Planetary Sciences 5/2000
University of Chicago, Dep't. of Geophysical Sciences 5/2000
University of Washington, Department of Atmospheric Sciences 8/2000
McGill University, Dep't. of Atmospheric and Oceanic Sciences, Montreal, Canada 2/2001
National Science Foundation, Arlington, Va. 2/2001
NOAA OAR division seminar, Silver Springs, Md. 2/2001
NASA Goddard Space Flight Center branch seminar, Greenbelt, Md. 2/2001
Geophysical Fluid Dynamics Laboratory, Princeton, NJ 3/2001
National Center for Atmospheric Research, ACD Division Seminar, Boulder, Co. 5/2001
Oxford University, Dep't. of Atm., Oceanic and Planetary Physics, Oxford, UK 7/2001
Colorado State University, Dept. of Atmospheric Sciences, Ft. Collins, CO 11/2001
Center for Ocean-Land-Atmosphere Studies, Calverton, MD 11/2001
Department of Physics, Colorado State University, Ft. Collins, CO 2/2002
Max Planck Institute for Meteorology, Hamburg, Germany 3/2002
GKSS Research Center, Geesthacht, Germany 3/2002
Danish Meteorological Institute, Copenhagen, Denmark 3/2002
Colorado State University, Sigma Xi Scientific Research Society 3/2002
University of Arizona, Department of Atmospheric Sciences 4/2002
Northwest Research Associates, Bellevue, Wa. 4/2002
University of Washington, Joint Institute for the Study of the Atmosphere and Ocean 5/2002
University of Colorado, CIRES, Boulder CO 5/2002
Cornell University, Department of Earth & Atmospheric Sciences, Ithaca NY 10/2002
Meteorological Service of Canada, Toronto, Canada 12/2002
Colorado School of Mines, Department of Physics Colloquium, Golden, CO 2/2003
New York University, Courant Institute of Mathematical Sciences, New York, NY 2/2003
University of Nebraska, Department of Meteorology, Lincoln, Nebraska 4/2003.
Northwest Research Associates, Bellevue, Wa. 11/2003
Bureau of Meteorology Research Centre, Melbourne, Australia 1/2004
CSIRO Marine Research, Hobart, Australia 1/2004
CSIRO Atmospheric Research, Aspendale, Australia 1/2004
Department of Atmospheric and Oceanic Sciences, University of Wisconsin, Madison, WI 2/2004

College of Atmospheric and Oceanic Sciences, Oregon State University, Corvallis OR 2/2004
Institute of Geophysics and Planetary Physics, UCLA, Los Angeles CA 5/2004
California Institute of Technology, Pasadena CA 5/2004
University of Bergen, Geophysics Institute, Bergen, Norway 5/2004
Bjerknes Centre for Climate Research, Bergen, Norway 5/2004
University of Reading, Department of Meteorology, Reading, UK 6/2004
University of Cambridge, Department of Chemistry, Cambridge, UK 6/2004
University of Washington, Department of Atmospheric Sciences 12/2004
National Institute for Water and Atmospheric Research, Wellington, NZ 1/2006; 2/2006
Victoria University, Wellington, NZ 2/2006
National Institute for Water and Atmospheric Research, Lauder, NZ 2/2006
University of Canterbury, Christchurch, NZ 2/2006
University of Washington, Department of Atmospheric Sciences 9/2006
University of New Hampshire, Dep't. of Earth Sciences 10/2006
Massachusetts Institute of Technology, Dep't. of Earth, Atm., and Planetary Sciences 10/2006
Golder & Associates (outreach lecture on climate change), Denver, CO. 12/2006
Bureau of Meteorology Research Centre, Melbourne, Australia 2/2007
CSIRO Atmospheric Research, Aspendale, Australia 2/2007
Purdue University, West Lafayette, Indiana 3/2007
University of Toronto, Department of Physics, 6/2007.
ARUP (outreach lecture on climate change), San Francisco, CA. 7/2007.
Bureau of Meteorology Research Centre, Melbourne, Australia 10/2007.
University of Tasmania, Hobart, Australia, 12/2007.
University of Melbourne, Melbourne, Australia, 12/2007.
Monash University, Melbourne, Australia 12/2007.
National Institute for Water and Atmospheric Research, Lauder, NZ 1/2008
University of New South Wales, Sydney, Australia 1/2008
University of Reading, Department of Meteorology, Reading, UK 3/2008
ETH, Zurich, Switzerland 3/2008
Univ. of Leeds, Leeds, UK 4/2008
IFM/GEOMAR, Kiel, Germany 4/2008
University of Reading, Department of Meteorology, Reading, UK 4/2008
University of East Anglia, Climatic Research Unit 4/2008
University of Cambridge, DAMTP, Cambridge, UK 5/2008
University of Bergen, Geophysics Institute, Bergen, Norway 10/2008
University of Victoria, Victoria, Canada 11/2008
University of Washington, Department of Atmospheric Sciences 11/2008
Massachusetts Institute of Technology, Dep't. of Earth, Atm., and Planetary Sciences 1/2009
National Center for Atmospheric Research CGD Division Seminar, Boulder, Co. 1/2009
National Center for Atmospheric Research ASP Seminar, Boulder, Co. 4/2009
NOAA Aeronomy Lab, Boulder, Co. 5/2009
Department of Geophysics, University of Bergen, 6/2009
University of Stockholm, Department of Meteorology, Stockholm, Sweden 6/2009
Western Washington University, Department of Environmental Science, 4/2010
University of California, Berkeley, BASC Seminar series, 9/2010
Climate Change Research Centre, Sydney, Australia, 10/2010
Centre for Australian Weather and Climate Research, Melbourne, Australia, 11/2010
GFDL/Princeton Univ., Princeton, NJ. 2/2011
Department of Physics/University of Bern, Bern, Ch. 4/2011
Physical Sciences Division, NOAA, Boulder, CO. 5/2011
Massachusetts Institute of Technology, Dep't. of Earth, Atm., and Planetary Sciences 4/2012
Harvard, Dept. of Environmental Sciences 4/2012
University of Washington, Dept of Atmospheric Science, 5/2012
ETH, Zurich, Switzerland 6/2012

HIH, Hohenpeissenberg, Germany 7/2012
Institute of Atmospheric Physics, DLR, Germany 7/2012
University of Exeter, Exeter UK 9/2012
University of Reading, Department of Meteorology, Reading, UK 9/2012
University of Colorado, Dept. of Atmospheric Sciences, Boulder CO 10/2012
SOGES (Outreach panel on polar climate), CSU, Ft. Collins CO 2/2013
Climate Change Research Centre, Sydney, Australia, 2/2013
Department of Geophysics, University of Bergen, 4/2013
EPA Region 8 (Outreach panel on polar climate). Denver CO 5/2013
Massachusetts Institute of Technology, Dep't. of Earth, Atm., and Planetary Sciences 5/2013
University of Reading, Department of Meteorology, Reading, UK 9/2013
Imperial College, Department of Physics, London, UK 9/2013
Environmental Defense Fund: Weathering Change. Denver CO 10/2013
Climate Change Research Centre, Sydney, Australia, 2/2014
New York University, Courant Institute of Mathematical Sciences, New York, NY 4/2014
Columbia University, Department of Mathematics, New York, NY 5/2014
University of Washington, Dept. of Atmospheric Science, 5/2014
University of Barcelona, Dept. of Physics, Barcelona, Spain 7/2014
University of Barcelona, Dept. of Astronomy and Meteorology, Barcelona, Spain 7/2014
ETH, Zurich, Switzerland 9/2014
Massachusetts Institute of Technology, EAPS, Boston, MA 9/2014
GFDL/Princeton Univ., Princeton, NJ 9/2014
National Center for Atmospheric Research, ACD, Boulder, Co. 10/2014
University of New Mexico, Dept. of Earth and Planetary Sciences, Albuquerque, NM 10/2014
University of Victoria/CCCMA, Victoria, Canada 4/2015
University of California at Berkeley, Dept. of Geography, Berkeley, CA 4/2015
Stanford University, School of Earth Sciences, Palo Alto, CA 4/2015
Geosciences Dept., CSU, Ft. Collins, CO, 5/2015
ETH, Zurich, Switzerland 9/2015
Univ. of Leeds, Leeds, UK 11/2015
ETH Dept of Env. Sciences, Zurich, Switzerland 12/2015
Department of Geophysics, University of Bergen, Norway 1/2016
Institute for Atmospheric Physics, University of Mainz, Mainz, Germany 3/2016
University of Reading, Department of Meteorology, Reading, UK 3/2016
Department of Physics/University of Bern, Bern, Ch. 3/2016
Max-Planck Institute for Meteorology, Hamburg, Germany 4/2016
Institut für Meteorologie, Freie Universität, Berlin, Germany 4/2016
Laboratoire de Meteorologie Dynamique/Jussieu, Paris, France 5/2016
ETH Dept of Env. Sciences, Zurich, Switzerland 2/2017
Massachusetts Institute of Technology, PAOC Research Seminar, Boston, MA 2/2017
Massachusetts Institute of Technology, EAPS Department Seminar, Boston, MA 3/2017
University of Exeter, Exeter UK 4/2017
University of Reading, Department of Meteorology, Reading, UK 9/2017
Department of Geophysics, University of Bergen, Norway 11/2017
GFDL/Princeton Univ., Princeton, NJ. 3/2018
Columbia University, Department of Mathematics, New York, NY 3/2018
University of Kyoto, Graduate School of Science, Kyoto, Japan 6/2018
University of Kyoto, Earth and Planetary Sciences, Kyoto, Japan 6/2018
University of Tokyo, Climate Science Research Laboratory, Tokyo, Japan 6/2018
University of Tokyo, Research Center for Advanced Science and Technology (workshop), Tokyo, Japan 6/2018
University of Hokkaido, Graduate School of Science, Sapporo, Japan 6/2018
University of Hokkaido, Earth and Planetary Sciences (workshop), Sapporo, Japan 7/2018
Harvard, Dept. of Environmental Sciences 10/2018

Stanford University, School of Earth Sciences, Palo Alto, CA 10/2018
University of Washington, Dept. of Atmospheric Science, 11/2018
Woods Hole Oceanographic Institute, Woods Hole, MA. 2/2019
ETH Dept of Env. Sciences, Zurich, Switzerland 4/2019
Weizmann Institute of Science, Dept. of Earth and Planetary Sciences, Rehovot, Israel 6/2019
The Hebrew University of Jerusalem, Jerusalem, Israel 6/2019
New York University, Courant Institute of Mathematical Sciences, New York, NY 9/2019
Oxford AOPP, Oxford, UK 3/2020
University of Exeter, Exeter UK 10/2021
University of East Anglia, School of Environmental Science, Norwich UK 12/2021
University of Leeds, Leeds UK 2/2022
University of St. Andrews, St. Andrews, UK 3/2022
University of Edinburgh, Edinburgh, UK 3/2022
University of Bergen, Geophysical Institute/Nansen Centre, Norway 4/2022
ICTP & University of Trento Seminar Series (delivered remotely) 4/2022
ETH Dept of Env. Sciences, Zurich, Switzerland 4/2022
University of Reading, Dept of Meteorology, Reading, UK 4/2022
British Antarctic Survey, Cambridge, UK 6/2022
University College London, London, UK 6/2022
University of Washington, Dept. of Atmospheric Science, 12/2022
Institute of Atmospheric Physics, DLR, Germany 7/2023
Department of Physics, Ludwig Maximillian University, Munich, Germany 7/2023
Columbia University, Department of Mathematics, New York, NY 10/2023
Massachusetts Institute of Technology, EAPS, Cambridge, MA 2/2024
UK Met Office, Exeter UK, 9/2024
University of Washington, Dept. of Atmospheric Science, 10/2024
University of Exeter, Exeter UK 2/2025
NCAR CAS meeting, Boulder CO 3/2025
CERES Science Team Meeting, NASA Langley (delivered remotely) 5/2025
Department of Geophysics, University of Bergen, Norway 6/2025

FUNDED PROPOSALS (does not include pending proposals)

2025-2028. (Selected but on hold pending uncertainty in US science funding). Thompson and Fu. NASA. $920,000.

2025-2028. Thompson and Rugenstein (US NSF) and Ceppi (UK NERC). $1,030,000.

2022-2026. Royal Society Wolfson Fellowship Award. The Royal Society, UK. 303,308 GBP.

2022-2025. Thompson, D. W. J. Using CloudSAT and CALIPSO data products to understand the role of clouds in extratropical climate variability. NASA CloudSAT and CALIPSO recompete. $525,000.

2021-2024. Thompson, D. W. J. Understanding the Influence of Climate Change on Temperature Persistence. NSF Climate and Large-Scale Dynamics Program. $795,202.

2021-2024. Hurrell, J. W. and D. W. J. Thompson. Collaborative Research: Quantifying the role of the ocean circulation in climate variability. NSF Climate and Large-Scale Dynamics Program. ($959,587 to CSU).

2017-2022. Thompson, D. W. J. and S. Solomon. Collaborative Research: Understanding the role of coupled chemistry-climate interactions in internal climate variability. NSF Climate and Large-Scale Dynamics Program. ($523,677 to CSU).

2017-2020. Thompson, D. W. J. Analyses of large-scale climate variability: Understanding periodicity in the extratropical storm tracks. NSF Climate and Large-Scale Dynamics Program. $697,861.

2017-2020. Birner, T. (administered by Thompson, D. W. J. after 2018). Aspects of the Dynamics of the Coupled Tropsphere-Stratosphere System. NSF Climate Dynamics Program. $496,532.

2016-2019. Thompson, D. W. J. Understanding two-way coupling between cloud radiative effects and the large-scale extratropical atmospheric circulation. NSF Climate Dynamics Program. $635,603.

2016-2019. Taylor, P. C., Y. Li, D. W. J. Thompson. Exposing systematic errors in Arctic clouds in climate models and their implications for climate change simulations. ($77,749 to CSU).

2014-2017. Cassano, J., M. Serreze, J. Stroeve, E. Cassano, J. A. Francis, and D. W. J. Thompson. An Integrated Observational/Modeling Assessment of the Effects of Recent and Future Arctic Change on Weather Systems in North America and the United States. NASA IDS. $988,466 ($73,392 to CSU).

2014-2017. Thompson, D. W. J. Analyses of Large-Scale Extratropical Climate Variability and Change. NSF Climate Dynamics Program. $738,632.

2013-2017. Thompson, D. W. J., E. D. Maloney, M. Alexander. Understanding the influence of large gradients in the extratropical sea-surface temperature field on the tropospheric circulation. NASA Physical Oceanography. $739,155.

2010-2013. Thompson, D. W. J. Analyses of Large-Scale Climate Variability. NSF Climate Dynamics Program. $685,992.

2006-2009. Thompson, D. W. J. Analyses of Climate Variability and Climate Change. NSF Climate Dynamics Program. $450,000.

2004-2007. Thompson, D. W. J., A. S. Denning, N. Gruber. Understanding the impacts of large scale climate variability on the global carbon cycle. NASA: Earth Science Enterprise's Earth Observing System Interdisciplinary Science Program. $868,000.

2003-2006. Randall, D. A., L. D. Fowler, D. W. J. Thompson. Analysis of precipitation variability as observed by emerging satellite systems. NASA Global Precipitation Mission. $360,000.

2003-2006. Thompson, D. W. J. Analysis of Annular Variability in the Global Circulation. NSF Climate Dynamics Program. $319,460.

2002-2007. Thompson, D. W. J. Analysis of the Southern Hemisphere Annular Mode and its role in climate change. National Science Foundation CAREER award. $400,000.

2000. Thompson, D. W. J. The Arctic Oscillation signature in Northern Hemisphere climate. NASA Earth System Science Fellowship Program. $22,000.