Dr. Christopher C. Weiss

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EDUCATION

Ph.D., University of Oklahoma, Department of Meteorology, 2004
Dissertation Title: Variational Pseudo Multiple-Doppler Analyses of a
Dryline Utilizing Very-High Resolution Mobile Doppler Radar Data
Advisor: Dr. Howard Bluestein

M.S., University of Oklahoma, Department of Meteorology, 2000
Thesis: Airborne Doppler Analysis of a Dryline-Outflow Boundary
Intersection and Subsequent Convection
Advisor: Dr. Howard Bluestein

 B.S., summa cum laude, University of Michigan (Ann Arbor), Dept. of Atmospheric, Oceanic and Space Sciences, 1997
 Advisor: Dr. Peter Sousounis

PROFESSIONAL EXPERIENCE

September 2018 – present: Professor of Atmospheric Science, Texas Tech University Department of Geosciences

September 2010 – August 2018: Associate Professor of Atmospheric Science, Texas Tech University Department of Geosciences

September-December 2015: Visiting Associate Professor, University of Michigan Department of Climate and Space Science

August 2004 – August 2010: Assistant Professor of Atmospheric Science, Texas Tech University Department of Geosciences

GRANT ACTIVITY

External Applications, Accepted and Pending

Co-Principal Investigator (lead PI: J. Keeler, Central Michigan University), "Collaborative Research: Maritime to Inland Transitions Towards Environments for Convection Initiation", National Science Foundation, 2024-2027, \$610,455. Effort: 100%

Principal Investigator "The low-level internal flow of tornadoes (LIFT) experiment", National Oceanic and Atmospheric Administration (CIWRO Task III), 2023-2026, \$1,136,089. Effort: 100%

Co-Principal Investigator (lead PI: A. Houston, University of Nebraska), "Collaborative Research: Investigation of supercell left flank boundaries and coherent structure: TORUS-LItE", National Science Foundation, 2023-2025, \$233,424/2 yrs. Effort: 100%

Principal Investigator, "VORTEX-USA: An Investigation of Forecast Improvements Realized Through Ensemble Sensitivity Analysis and Subsetting", National Oceanic and Atmospheric Administration, 2023-2026, \$649,642 / 3 yrs., Effort: 50%

Principal Investigator, "The Propagation, Evolution and Rotation in Linear Storms (PERiLS) Project" (Y2 data collection), National Oceanic and Atmospheric Administration, 2022-2023, \$238,000/1 yr. Effort: 100%

Co-Principal Investigator (PI: S. Pal), "Synergetic Surface-based and Satellite-borne Measurements of Arid-region Aerosol and Precipitation (S³-MAAP)", National Aeronautics and Space Administration, 2021, \$600,000 / 5 yrs. Effort: 10%

Principal Investigator, "Environmental and Storm-generated Controls in Modulating Quasi-linear Convective System Vertical Vorticity: Dynamics and Detection", National Oceanic and Atmospheric Administration, 2021, \$1,589,283 (\$513,071 to Texas Tech). Effort: 50%

Principal Investigator, supplement for Targeted Observations by Radars and Unmanned Aircraft Systems of Supercells (TORUS) project", National Science Foundation, 2021, \$85,143. Effort: 100%

Principal Investigator, "The Propagation, Evolution and Rotation in Linear Storms (PERiLS) Project", National Oceanic and Atmospheric Administration, 2021, \$220,001/1 yr. Effort: 100%

Principal Investigator, "NWI: VORTEX-SE: Assessment of the Role of Cold Pools in Low-Level Vorticity Production using Direct Observations and Ensemble Sensitivity Analysis", National Oceanic and Atmospheric Administration, 2020-2022, \$211,176/2 yrs. Effort: 100%

Co-Principal Investigator (PI: B. Ancell), "Improving Forecasts of Severe Convection through Real Time Sensitivity-Based Ensemble Adjustment within an FV3 Framework", National Oceanic and Atmospheric Administration, 2020-2023, \$446,623/3 yrs. Effort: 50%

Principal Investigator, "Potential Sites for StickNet Surface Observation in Southeast Subregions of US", National Oceanic and Atmospheric Administration, 2019-2020, \$23,298/6 mos. Effort: 100%

Co-Principal Investigator (PI: E. Bruning), "VORTEX-SE: Characterization of Microphysical Processes in Potentially Tornadic Southeast U.S. Storms via Polarimetric Radar – Disdrometer – Lightning Synthesis", National Oceanic and Atmospheric Administration, 2019-2021, \$147,273/2 yrs. Effort: 50%

Principal Investigator, "Follow On for Collection of Surface Mesoscale Data in the Northern Alabama Region", National Oceanic and Atmospheric Administration, 2019, \$139,395. Effort: 100%

Principal Investigator, "Services to Collect Surface Meteorological Data for the VORTEX-SE Meso18-19 Field Campaign", National Oceanic and Atmospheric Administration, 2018-2019, \$101,383. Effort: 100%

Co-Principal Investigator (PI: A. Houston, Univ. of Nebraska), "Collaborative Research: Targeted Observations by Radars and UAS of Supercells (TORUS)", National Science Foundation, 2018-2021, \$698,823/3 yrs. Effort: 100%

Principal Investigator (Co-Pls: E. Bruning, D. Dowell, C. Alexander), "VORTEX-SE: Establishing the Interdependence of Thermodynamic State, Lightning, and Low-Level Vorticity as a Foundation for Improved Forecaster Awareness of Southeast U.S. Storms", National Oceanic and Atmospheric Administration, 2018-2020, \$299,039 / 2 yrs. Effort 50%

Principal Investigator (Co-PIs: E. Bruning, J. Dahl, D. Dowell, C. Alexander), "VORTEX-SE: Insights into the Structure and Predictability of Southeastern U.S. Tornadic Storms Afforded by Intensive Observation and High-Resolution Numerical Modeling", National Oceanic and Atmospheric Administration, 2017-2019, \$149,754 / 2 yrs. Effort: 34%

Co-Principal Investigator (PI: B. Ancell), "Ensemble Subsetting within Optimized Ensembles to Improve Probabilistic Prediction of Severe Convection", National Oceanic and Atmospheric Administration Collaborative Science, Technology, and Applied Research (CSTAR) Program, 2017-2020, \$448,137/3 yrs. Effort: 50%

Principal Investigator (Co-Pls: E. Bruning, J. Dahl, D. Dowell, C. Alexander), "VORTEX-SE: The Role and Predictability of Baroclinic and Terrain Influences in Southeastern U.S. Tornado Environments", National Oceanic and Atmospheric Administration, 2016-2018, \$249,835 / 2 yrs. Effort: 34%

Principal Investigator (Co-PIs: E. Bruning, J. Dahl, D. Dowell, C. Alexander), "VORTEX-SE: Improving Understanding and Predictability of Tornadic Storms in the Southeastern U.S. Using Intensive Observations and High-Resolution Modeling", National Oceanic and Atmospheric Administration, 2015-2017, \$249,942 / 2 yrs. Effort: 34%

Co-Principal Investigator (PI: E. Frew, Univ. of Colorado), "NRI: Collaborative Research: Targeted Observation of Severe Local Storms Using Aerial Robots", National Science Foundation, 2015-2018, \$356,246 / 3 yrs. Effort: 100%

Co-Principal Investigator (PI: B. Ancell), "Development of Probabilistic and Sensitivity-Based Forecast Tools to Improve High-Impact Forecasting Guidance at the NWS", National Oceanic and Atmospheric Administration Collaborative Science, Technology, and Applied Research (CSTAR) Program, 2014-2017, \$369,333 / 3 yrs. Effort: 50%

Co-Principal Investigator (PI: E. Frew, Univ. of Colorado), "Energy-Aware Aerial Systems for Persistent Sampling and Surveillance", Air Force Office of Scientific Research, 2012-2015, \$446,052/3 yrs. Effort: 100%

Co-Principal Investigator (PI: B. Ancell), "Integration of Forecast Sensitivity into the NWS Forecasting Process to Improve Predictability of High-impact Weather", NWS CSTAR Program, 2011, \$346,069/3 yrs. Effort: 50%

Principal Investigator (Co-PI: D. Dowell, National Center for Atmospheric Research), "Project VORTEX2: Investigation of Storm-scale Baroclinity using Fine-scale Observations and Numerical Models", National Science Foundation, 2008, \$645,097/4 yrs. Effort: 100%

Principal Investigator, "Simulation of VORTEX2 Supercell Thunderstorms and Verification with StickNet Observations", National Center for Atmospheric Research Climate Simulation Laboratory, 2009-2012, 84,480 GAUs. Effort: 100%

Principal Investigator (PI: D. Dowell, National Center for Atmospheric Research), supplement request to NSF (\$68,533) for participation in 2010 field phase of VORTEX2. Effort: 100%

Principal Investigator (lone PI), "Investigating the structure of tornadoes and the near-tornado environment using mobile high-frequency Ka-band Doppler radar technology", National Science Foundation, 2010, \$355,344 / 3 yrs. Effort: 100%

Co-Investigator, "FY10 Great Plains Wind Power Test Facility", U. S. Department of Energy, 2010, \$1.7M. Effort: 7%

Co-Investigator, "Great Plains Wind Power Test Facility", U. S. Department of Energy, 2018, \$1.97M. Effort: 7%

REFEREED PUBLICATIONS

Statistics (from those publications listed in Web of Science):

Number of citations: 1042

Citing articles: 672

h-index: 18

Underlined first authors indicates graduate students advised

- [47] Silcott, M. K., M. D. Parker, K. A. Kosiba, S. W. Nesbitt, R. J. Trapp, J. Wurman, and C. C. Weiss, 2025: Structure of cold pools from PERiLS 2022-2023. *Monthly Weather Review* (submitted)
- [46] Houston, A. L., C. C. Weiss, E. N. Rasmussen, M. C. Coniglio, C. L. Ziegler, B. M. Argrow, and E. W. Frew, 2025: Targeted Observations by Radars and UAS of Supercells: TORUS. Bull. Amer. Meteor. Soc., accepted pending revisions.
- [45] Ostaszewski, J. S., C. C. Weiss, J. M. McDonald, M. C. Coniglio, and S. M. Waugh, 2025: Surface cold pool observations near tornadic and nontornadic QLCS mesovortices during PERiLS. Mon. Wea. Rev. (in revision)
- [44] Pardun, T. J., A. E. Reinhart, C. C. Weiss, E. N. Rasmussen, S. M. Waugh, A. L. Houston, 2025: The observed and simulated analysis of supercellular demise from 15 June 2019. *Mon. Wea. Rev.* (submitted)
- [43] Brunner, K., E. Bruning, V. Chmielewski, C. C. Weiss, C. J. Schultz, R. L. Tanamachi, 2025: Polarimetric signals in southeastern thunderstorms: an objective tracking and polarimetric column analysis. J. Atmos. Sci. (in revision)
- [42] Kosiba, K. A., and Coauthors, 2024: The Propagation, Evolution and Rotation in Linear Storms (PERiLS) Project. *Bull. Amer. Meteor. Soc.,* **105**, E1768-E1799.
- [41] Fischer, J., J. M. L. Dahl, B. E. Coffer, J. L. Houser, P. M. Markowski, M. D. Parker, C. C. Weiss, A. Schueth, 2024: Supercell tornadogenesis: Recent progress in our state of understanding. *Bull. Amer. Meteor. Soc.*, 105, 1084-1097.
- [40] Axon, K. L., A. L. Houston, C. L. Ziegler, C. C. Weiss, E. N. Rasmussen, M. C. Coniglio, B. Argrow, E. Frew, S. Swenson, A. E. Reinhart, M. B. Wilson, 2023: The potential roles of preexisting airmass boundaries on a tornadic supercell observed by TORUS on 28 May 2019. *Mon. Wea. Rev.*, 152, 97-121.

- [39] <u>Hutson, A.</u>, and **C. C. Weiss**, 2023: Using ensemble sensitivity analysis to identify storm characteristics associated with tornadogenesis in high resolution simulated supercells. *Mon. Wea. Rev.*, **151**, 2633-2658.
- [38] Schultz, D., J. Anderson, T. Benacchio, K. L. Corbosiero, M. D. Eastin, C. Evans, J. Gao, J. P. Hacker, D. Hodyss, D. Kleist, M. R. Kumjian, R. McTaggart-Cowan, Z. Meng, J. Minder, D. Posselt, P. Roundy, A. Rowe, M. Scheuerer, R. S. Schumacher, S. Trier, and C. C. Weiss, 2022: How to be a more effective author. *Mon. Wea. Rev.*, 150, 2819-2828.
- [37] Frew, E. W., B. Argrow, A. Houston, and C. C. Weiss, 2022. "An Energy-Aware Airborne Dynamic Data-Driven Application System for Persistent Sampling." Second Handbook of Dynamic Data Driven Applications Systems. Edited by Frederica Darema and Erik Blasch. 2022. [Under review]
- [36] Hill, A. J., C. C. Weiss, and D. Dowell, 2021: Influence of a portable near-surface observing network on experimental ensemble forecasts of deep convection during VORTEX-SE. Wea. Forecasting, 36, 1141-1167.
- [35] McDonald, J., C. C. Weiss, 2021: Cold pool characteristics from tornadic quasi-linear convective systems and other convective modes observed during the VORTEX-SE project. *Mon. Wea. Rev.*, 149, 821-840.
- [34] Schueth, A., C. C. Weiss, and J. L. Dahl, 2021: Comparing observations and simulations of the streamwise vorticity current and the forward flank convergence boundary in a supercell storm. *Mon. Wea. Rev.*, **149**, 1651-1671.
- [33] Schultz, D. M, A. Aksoy, J. Anderson, T. Benacchio, K. L. Corbosiero, M. D. Eastin, C. Evans, J. Gao, A. Gassman, J. P. Hacker, D. Hodyss, M. R. Kumjian, R. McTaggart-Cowan, G. Romine, P. Roundy, A. Rowe, E. Satterfield, R. S. Schumacher, S. Trier, C. C. Weiss, H. P. Huntington, and G. M. Lackmann, 2020: Data availability principles and practice. *Mon. Wea. Rev.*, 148, 4701-4702.
- [32] <u>Hill, A. J.,</u> **C. C. Weiss**, and B. C. Ancell, 2020: Factors influencing ensemble sensitivity-based targeted observing predictions at convection-allowing resolutions. *Mon. Wea. Rev.*, **148**, 4497-4517.
- [31] Hutson, A., C. C. Weiss and G. Bryan, 2019: Using the translation

- speed and vertical structure of gust fronts to infer buoyancy deficits within thunderstorm outflow. *Mon. Wea. Rev.*, **147**, 3575-3594.
- [30] Bluestein, H. B., G. S. Romine, R. Rotunno, D. W. Reif and C. C. Weiss, 2018: On the anomalous counterclockwise turning of the surface wind with time in the Plains of the United States. *Mon. Wea. Rev.*, 146, 467-484.
- [29] Griffin, C. B., C. C. Weiss, A. E. Reinhart, J. C. Snyder, H. B. Bluestein, J. Wurman and K. A. Kosiba, 2018: In situ and radar observations of the low reflectivity ribbon. *Mon. Wea. Rev.*, 146, 307-327.
- [28] Gunter, W. S., J. L. Schroeder, **C. C. Weiss** and E. C. Bruning, 2017: Surface measurements of a damaging thunderstorm wind event., *Wind and Structures.*, **24**, 185-204.
- [27] Hill, A. J., C. C. Weiss, and B. C. Ancell, 2016: Ensemble sensitivity analysis for mesoscale forecasts of dryline convection initiation., *Mon. Wea. Rev.*, **144**, 4161-4182.
- [26] Klees, A. M., Y. P. Richardson, P. M. Markowski, C. C. Weiss, J. M. Wurman, K. K. Kosiba, 2016: Comparison of tornadic and nontornadic supercells intercepted by VORTEX2 on 10 June 2010. Mon. Wea. Rev., 144, 3201-3231.
- [25] Weiss, C. C., D. C. Dowell, J. L. Schroeder, P. S. Skinner, A. E. Reinhart, P. M. Markowski, and Y. P. Richardson, 2015: A comparison of near-surface buoyancy and baroclinity across three VORTEX2 supercell intercepts. *Mon. Wea. Rev.*, 143, 2736-2753.
- [24] Skinner, P. S., C. C. Weiss, L. J. Wicker, C. K. Potvin, and D. C. Dowell, 2015: Forcing mechanisms for an internal rear-flank downdraft momentum surge in the 18 May 2010 Dumas, Texas supercell. *Mon. Wea. Rev.*, 143, 4305-4330.
- [23] Luo, J., D. Liang, and C. C. Weiss, 2015: Reconstruction of the near-surface tornado wind field from observed building damage., Wind and Structures, 20, 389-404.
- [22] Skinner, P. S., C. C. Weiss, M. M. French, H. B. Bluestein, P. M. Markowski, and Y. P. Richardson, 2014: VORTEX2 observations of a low-level mesocyclone with multiple internal rear-flank downdraft momentum surges in the 18 May 2010 Dumas, Texas, supercell. *Mon. Wea. Rev.*, 142, 2935-2960.

- [21] <u>Beck, J. R.</u>, **C. C. Weiss**, 2013: An assessment of low-level baroclinity and vorticity within a simulated supercell. *Mon. Wea. Rev.*, **141**, 649-669.
- [20] Illston, B. G., J. B. Basara, C. C. Weiss, M. Voss, 2013: The WxChallenge: Forecasting competition, educational tool, and agent of cultural change., Bull. Amer. Meteor. Soc., 94, 1501-1506.
- [19] Hirth, B. D., J. L. Schroeder, C. C. Weiss, D. A. Smith, and M. I. Biggerstaff, 2012: Research radar analyses of the internal boundary layer over Cape Canaveral, FL during the landfall of Hurricane Frances., Wea. Forecasting, 27, 1349-1372.
- [18] Skinner, P. S., C. C. Weiss, J. L. Schroeder, L. J. Wicker and M. I. Biggerstaff, 2011: Observations of the surface boundary structure within the 23 May, 2007 Perryton, Texas supercell., *Mon. Wea. Rev.*, 139, 3730-3749.
- [17] Yeary, M. B., T.-Y. Yu, R. D. Palmer, H. Monroy, I. Ruin, G. Zhang, P. B. Chilson, M. I. Biggerstaff, C. C. Weiss, K. A. Mitchell, L. D. Fink, 2010: Working together for better student learning: A multi-university, multi-federal partner program for asynchronous learning module development for radar-based remote sensing systems. *IEEE Trans. on Education*, 53, no. 3, 504-515.
- [16] Weiss, C. C., and J. L. Schroeder, 2008: StickNet: A new portable, rapidly-deployable surface observation system, *Bull. Amer. Meteor. Soc.*. 89, 1502-1503.
- [15] Hirth, B. D., J. L. Schroeder, and C. C. Weiss, 2008: Surface analysis of the rear-flank downdraft outflow in two tornadic supercells., Mon. Wea. Rev., 136, 2344-2363.
- [14] Schroeder, J. L., and **C. C. Weiss**, 2008: Integrating research and education through measurement and analysis., *Bull. Amer. Meteor. Soc.*, **89**, 793-798.
- [13] Walter, K., C. C. Weiss, A. H. P. Swift, J. Chapman, N. D. Kelley, 2008: Speed and direction shear in the stable nocturnal boundary layer, *J. Solar Energy Engineering*, **131**, 11013-1 11013-7.
- [12] **Weiss, C. C.**, H. B. Bluestein, and A. L. Pazmany, 2008: Fine-scale radar observations of a dryline during the International H₂O Project (IHOP). *American Meteorological Society, Sanders Symposium Monograph*, No. 55, 440 pp.
- [11] Schultz, D. M., **C. C. Weiss**, and P. M. Hoffman, 2007: The synoptic regulation of dryline intensity., *Mon. Wea. Rev.*, **135**, 1699-1709.

- [10] Bluestein, H. B., C. C. Weiss, M. M. French, E. M. Holthaus, R. L. Tanamachi, S. Frasier, and A. L. Pazmany, 2007: The structure of tornadoes near Attica, Kansas on 12 May 2004: High-resolution, mobile, Doppler-radar observations., Mon. Wea. Rev., 135, 475-506.
- [9] Weiss, C. C., H. B. Bluestein, R. Conzemius, and E. Fedorovich, 2007: Variational pseudo-multiple Doppler-wind retrieval in the vertical plane for ground-based mobile-radar data. *J. Atmos. Oceanic Technol.*, 24, 1165-1185.
- [8] Weiss, C. C., H. B. Bluestein, and A. L. Pazmany, 2006: Fine-scale radar observations of the 22 May 2002 dryline during the International H₂O Project (IHOP). *Mon. Wea. Rev.*, 134, 273-293.
- [7] Biggerstaff, M. I., L. J. Wicker, J. Guynes, C. Ziegler, J. M. Straka, E. N. Rasmussen, A. Doggett IV, L. D. Carey, J. L. Schroeder, and C. C. Weiss, 2005: The Shared Mobile Atmospheric Research and Teaching (SMART) Radar: A collaboration to enhance research and teaching., Bull. Amer. Meteor. Soc., 86, 1263-1274.
- [6] Bluestein, H. B., C. C. Weiss, and A. L. Pazmany, 2004: Doppler radar observations of dust devils in Texas. Mon. Wea. Rev., 132, 209-224.
- [5] Bluestein, H. B., C. C. Weiss, and A. L. Pazmany, 2004: The vertical structure of a tornado near Happy, Texas, on 5 May 2002: Highresolution, mobile, W-band, Doppler radar observations., *Mon. Wea. Rev.*, 132, 2325-2337.
- [4] Bluestein, H. B., C. C. Weiss, and A. L. Pazmany, 2003: Mobile Doppler radar observations of a tornado in a supercell near Bassett, Nebraska, on 5 June 1999. Part I: Tornadogenesis., Mon. Wea. Rev., 131, 2954-2967.
- [3] Bluestein, H. B., W.-C. Lee, M. Bell, **C. C. Weiss**, and A. L. Pazmany, 2003: Mobile Doppler radar observations of a tornado in a supercell near Bassett, Nebraska, on 5 June 1999. Part II: Tornado-vortex structure., *Mon. Wea. Rev.*, **131**, 2968-2984.
- [2] Weiss, C. C., and H. B. Bluestein, 2002: Airborne pseudo-dual Doppler analysis of a dryline-outflow boundary intersection., *Mon. Wea. Rev.*, 130, 1207-1226.
- [1] **Weiss, C. C.,** and P. J. Sousounis, 1999: A climatology of collective lake disturbances., *Mon. Wea. Rev.*, **127**, 565-574.

CONFERENCE ACTIVITY

- [186] Buhrman, J., and **C. C. Weiss**, 2025: An analysis of high frequency radar measurements of spatiotemporally varying low-level vertical wind shear near supercells from the TORUS campaign. 33rd Conference on Weather Analysis and Forecasting (105th AMS Annual Meeting), paper 375.
- [185] Ostaszewki, J. S., and **C. C. Weiss**, 2025: An idealized study of QLCS-supercell mergers in high-shear, low-CAPE environments. 33rd Conference on Weather Analysis and Forecasting (105th AMS Annual Meeting), paper J4B.4.
- [184] Keeler, J. M., D. A. R. Kristovich, J. Wang, C. C. Weiss, G. de Boer, B. M. Argrow, A. L. Houston, K. T. Brooks, C. J. Isenberger, E. C. Jilek, and J. Miller, 2025: The Matirime to Inland Transitions Towards Environments for Convection Initiation (MITTEN-CI) Campaign. 33rd Conference on Weather Analysis and Forecasting (105th AMS Annual Meeting), paper 369.
- [183] Ostaszewski, J. S., and **C. C. Weiss**, 2024: An investigation of QLCS-supercell mergers in high shear-low CAPE environments. 31st Conference on Severe Local Storms, paper 3B.6.
- [182] Buhrman, J., and **C. C. Weiss**, 2024: High-frequency radar measurements of spatiotemporally varying low-level vertical wind shear near supercells from the TORUS campaign. *31st Conference on Severe Local Storms*, paper 8B.1.
- [181] **Weiss, C. C.**, and A. Schueth, 2024: High-frequency radar observations of forward-flank outflows and streamwise vorticity currents from TORUS(-Lite) and LIFT. 31st Conference on Severe Local Storms, paper 8B.2.
- [180] Satrio, M., D. M. Stechman, M. C. Coniglio, C. L. Ziegler, A. E. Reinhart, and C. C. Weiss, 2024: A multi-Doppler analysis of the 23 May 2022 Morton, TX tornadic supercell sampled during TORUS. 31st Conference on Severe Local Storms, paper 8B.3.
- [179] Stechman, D. M., C. L. Ziegler, M. C. Coniglio, M. Satrio, E. Bartos, P. M. Markowski, Y. P. Richardson, A. E. Reinhart, and C. C. Weiss: On the structure and evolution of the 20 May 2019 Mangum, OK supercell observed during TORUS. 31st Conference on Severe Local Storms, paper 8B.4.

- [178] Ziegler, C. L., P. M. Markowski, Y. P. Richardson, **C. C. Weiss**, and S. M Waugh: Cold pool forcing of the streamwise vorticity current and low-level mesocyclonic rotation in the 9 June 2009 supercell during VORTEX2. 31st Conference on Severe Local Storms, paper 20.
- [177] Schueth, A., and **C. C. Weiss**, 2024: The effects of vertical wind shear profiles on supercell attributes and streamwise vorticity current dynamics. 31st Conference on Severe Local Storms, paper 25.
- [176] **Weiss, C. C.**, and A. Schueth, 2024: Highlights from the 2024 low-level internal flow of tornadoes (LIFT) field campaign. 31st

 Conference on Severe Local Storms, paper 50.
- [175] McDonald, J. M., and **C. C. Weiss**, 2024: Vortexgenesis mechanisms in idealized high-shear, low-CAPE quasi-linear convective systems. *31st Conference on Severe Local Storms*, paper 9.5.
- [174] Faletti, W. L., **C. C. Weiss**, P. Skinner, and B. C. Ancell, 2024: Identifying near-storm controls on supercells in the Warn-on-Forecast system using ensemble sensitivity analysis. 31st Conference on Severe Local Storms, paper 114.
- [173] Schueth, A., and **C. C. Weiss**, 2024: Direct downstream impacts of the streamwise vorticity current on the low-level mesocyclone and tornadogenesis. 31st Conference on Severe Local Storms, paper 18.4
- [172] Silcott, M. J., M. D. Parker, K. A. Kosiba, S. W. Nesbitt, R. J. Trapp, C. C. Weiss, and J. Wurman, 2024: Properties of QLCS cold pools observed during PERiLS. 31st Conference on Severe Local Storms, paper 42.
- [171] McDonald, J. M., and **C. C. Weiss**, 2024: Importance of the baroclinic mechanism for vortexgenesis in idealized simulations of high-shear, low-CAPE quasi-linear convective systems. 10th Symposium on High Performance Computing for Weather, Water and Climate (104th AMS Annual Meeting), paper 4.4
- [170] Ostaszewski, J. S., E. N. Smith, T. Bell, J. Gebauer, and C. C. Weiss, 2024: Near-storm environment spatiotemporal analysis of the lowest 1 km of the boundary layer using high-resolution mobile lidar and radar from the TORUS project. 24th Symposium on Meteorological Observation and Instrumentation (104th AMS Annual Meeting), paper 9.2

- [169] Pal, S., E. C. Bruning, H. Dhaliwal, B. Hirth, K. Ardon-Dryer, J. Schroeder, and C. C. Weiss, 2024: Preliminary findings from the Synergetic surface-based satellite-borne measurements of arid-region aerosol and precipitation (S³-MAAP) project. 24th Symposium on Meteorological Observation and Instrumentation (104th AMS Annual Meeting), paper 9.3
- [168] Faletti, W. L., C. C. Weiss, P. S. Skinner, 2024: The utility of an ensemble sensitivity-based subsetting technique to improve mesocyclone intensity forecasts in the NOAA Warn-on-Forecast system. 28th Conference on Integrated Observing and Assimilations Systems for the Atmosphere, Ocean and Land Surface (104th AMS Annual Meeting), paper 9.4
- [167] Singewald, D., E. C. Bruning, C. C. Weiss, K. Brunner, 2024: Analysis of satellite and ground based lightning detection network performance in photographed supercell and multicell events. 26th Conference on Satellite Meteorology, Ocenaography, and Climatology (104th AMS Annual Meeting), paper E86.
- [166] Pal, S., E. C. Bruning, H. Dhaliwal, B. Hirth, K. Ardon-Dryer, J. Schroeder, and C. C. Weiss, 2023: Synergetic surface-based satellite-borne measurements of arid-region aerosol and precipitation (S³-MAAP): An overview of selected research highlights. AGU Annual Meeting, paper A11M-2171
- [165] Weiss, C. C., A. Schueth, 2023: The kinematic character of supercell forward flank outflows from the TORUS project. 40th Conference on Radar Meteorology, paper 7A.3
- [164] Schueth, A., C. C. Weiss, C. L. Ziegler, E. Rasmussen, M. C. Coniglio, 2023: The May 27, 2019 Imperial, NE supercell during TORUS: Origins, observations, and impacts of an SVC. 40th Conference on Radar Meteorology, Paper 7A.1
- [163] Brunner, K., E. C. Bruning, C. C. Weiss, V. C. Chmielewski, 2023: Temporal evolution of lightning-microphysics relationships in southeastern US thunderstorms: insights from StickNet, LMA, and WSR-88D data. 40th Conference on Radar Meteorology, Paper 10A.5
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- [57] Skinner, P. S., C. C. Weiss, L. J. Wicker, and C. K. Potvin, 2012: VORTEX2 observations and data assimilation experiments of the 18 May 2010 Dumas, Texas supercell. 26th Conference on Severe Local Storms, Nashville, TN, paper 13.6.
- [56] Weiss, C. C., D. C. Dowell, P. S. Skinner, A. E. Reinhart, 2012: An assessment of buoyancy and baroclinity within select VORTEX2 storms. 26th Conference on Severe Local Storms, Nashville, TN, paper 13.4.
- [55] Ziegler, C. L., M. I. Biggerstaff, L. J. Wicker, D. W. Burgess, E. R. Mansell, C. M. Schwarz, P. M. Markowski, Y. P. Richardson, and C. C. Weiss, 2012: Cold pool forcing of the 9 June 2009 Greensburg, KS supercell during VORTEX2. 26th Conference on Severe Local Storms, Nashville, TN, paper 14.4.
- [54] Metzger, R. S., C. C. Weiss, and A. E. Reinhart, 2011: An

- examination of the structure of three tornadoes using high-frequency Ka-band mobile Doppler radar. *35th Conference on Radar Meteorology*, Pittsburgh, PA, paper 7B.4.
- [53] Reinhart, A. E., C. C. Weiss and D. C. Dowell, 2011: High-frequency dual-Doppler analysis of a retrograding dryline/baroclinic boundary intersection. 35th Conference on Radar Meteorology, Pittsburgh, PA, paper 59.
- [52] Reynolds, A. E., G. M. Heymsfield, G. S. Jenkins, and C. C. Weiss, 2011: Causes for collapse of transitioning mesoscale convective systems in the East Atlantic. 35th Conference on Radar Meteorology, Pittsburgh, PA, paper 12A.4.
- [51] Skinner, P. S., C. C. Weiss, M. M. French, H. B. Bluestein, I. PopStefanija and R. Bluth, 2011: Ka and X-band radar observations of multiple rear-flank downdraft surges and an intense near-surface vortex on 18 May 2010. 35th Conference on Radar Meteorology, Pittsburgh, PA, paper 7B.1
- [50] Weiss, C. C., J. L. Schroeder, J. Guynes, A. E. Reinhart, P. S. Skinner, and S. Gunter, 2011: A Review of Texas Tech Ka-band operations during VORTEX2. 35th Conference on Radar Meteorology, Pittsburgh, PA, paper 7B.2
- [49] Charboneau, B. R., and C. C. Weiss, 2010: Thermodynamic and kinematic analysis of supercells using high resolution in situ data from Texas Tech StickNet instrument systems. 25th Conference on Severe Local Storms, Denver, CO, paper 8A.3.
- [48] Metzger, R. S., and **C. C. Weiss**, 2010: An examination of the vertical structure of two tornadoes using Ka-band mobile Doppler radar. *25th Conference on Severe Local Storms*, Denver, CO, paper 16A.6.
- [47] Reinhart, A. E., C. C. Weiss, and D. C. Dowell, 2010: Verification of supercell cold pools in high-resolution WRF simulations using StickNet in situ data. 25th Conference on Severe Local Storms, Denver, CO, paper 8A.5.
- [46] Skinner, P. S., C. C. Weiss, P. M. Markowski, and Y. P. Richardson, 2010: Intercomparison between mobile and stationary surface observing platforms in VORTEX2. 25th Conference on Severe Local Storms, Denver, CO, paper P5.1.
- [45] Skinner, P. S., C. C. Weiss, A. E. Reinhart, W. S. Gunter, J. L. Schroeder, and J. Guynes, 2010: TTUKa mobile Doppler radar observations of near-surface circulations in VORTEX2. 25th

- Conference on Severe Local Storms, Denver, CO, paper 15.3.
- [44] Weiss, C. C., and D. C. Dowell, 2010: Highlights from the Texas Tech Ka-band mobile Doppler radar and StickNet data collection during VORTEX2. 25th Conference on Severe Local Storms, Denver, CO, paper 5.5.
- [43] Ziegler, C. L., M. I. Biggerstaff, L. J. Wicker, D. W. Burgess, E. R. Mansell, C. M. Schwarz, P. Markowski, Y. P. Richardson, and C. C. Weiss, 2010: Storm structure and decay process of the 9 June 2009 Greensburg, KS supercell during VORTEX2. 25th Conference on Severe Local Storms, Denver, CO, paper 7A.2.
- [42] Illston, B. G., J. B. Basara, M. Voss, and C. C. Weiss, 2009: An overview of the WxChallenge forecasting competition and its use as an educational tool. 18th Symposium on Education, Phoenix, AZ, paper 4.4.
- [41] Schroeder, J. L., **C. C. Weiss**, and J. Guynes, 2009: Innovative technologies to investigate fine-scale atmospheric motions and their impact, *Proceedings*, 11th Americas Conference on Wind Engineering, Puerto Rico.
- [40] Weiss, C. C., J. L. Schroeder, J. Guynes, P. S. Skinner, J. Beck, 2009: The TTUKa mobile Doppler radar: Coordinated radar and in situ measurements of supercell thunderstorms during Project VORTEX2. 34th Conference on Radar Meteorology, Williamsburg, VA, paper 11B.2.
- [39] Beck, J., and **C. C. Weiss**, 2008: The effects of thermodynamic variability on low-level baroclinity and vorticity within numerically simulated supercell thunderstorms. *24th Conference on Severe Local Storms*, Savannah, GA, paper 15.4
- [38] Dreessen, J. A., and C. C. Weiss, 2008: Kinematic and thermodynamic variability in the supercell environment observed using StickNet. 24th Conference on Severe Local Storms, Savannah, GA, paper P13.3
- [37] Horgan, K. L., and **C. C. Weiss**, 2008: The initiation and maintenance of convection along synoptically-quiescent drylines. *Seventh Annual AMS Student Conference*, New Orleans, LA.
- [36] Rogers, J. W., and **C. C. Weiss**, 2008: The association of cell mergers with tornado occurrence. *24th Conference on Severe Local Storms*, Savannah, GA, paper P3.23.
- [35] Skinner, P. S., and C. C. Weiss, 2008: Observations of storm scale

- boundary evolution within the 23 May 2007 Perryton, TX supercell. 24th Conference on Severe Local Storms, Savannah, GA, paper 4.3
- [34] **Weiss, C. C.**, and J. L. Schroeder, 2008: StickNet A new portable, rapidly-deployable, surface observing system. 88th Annual Meeting of the American Meteorological Society, New Orleans, LA, paper 4A.1
- [33] **Weiss, C. C.**, and J. L. Schroeder, 2008: The 2007 and 2008 MOBILE Experiment: Development and testing of the TTU StickNet platforms. *24th Conference on Severe Local Storms*, Savannah, GA, paper 5.1
- [32] Weiss, C. C., and J. Wurman, 2008: Coordinated in-situ and remote sampling of supercell thunderstorms. 24th Conference on Severe Local Storms, Savannah, GA, paper P3.9
- [31] Schultz, D. M., and **C. C. Weiss**, 2007: Synoptic and mesoscale regulation of dryline intensity and associated convection. *22nd Conference on Weather Analysis and Forecasting*, Park City, UT, paper 7A.7
- [30] Walter, K. R., **C. C. Weiss**, J. Chapman, and N. D. Kelley, 2007: Tall tower wind shear observations in the stable nocturnal boundary layer. *Proceedings of the 45th American Institute of Aeronautics and Astronautics (AIAA) Aerospace Sciences Meeting*, Reno, NV, paper AIAA-2007-1224
- [29] Walter, K., Weiss, C.C., Swift, A.H.P., Chapman, J., and N. Kelley, 2007: Observations of extreme speed and directional wind shear in the US Great Plains" *Proceedings of the 2007 European Wind Energy Conference and Exhibition*, Milan, Italy, European Wind Energy Association, Brussels, Belgium.
- [28] **Weiss, C. C.**, 2007: The imperfect relationship between dryline intensity and mesoscale confluence. *12th Conference on Mesoscale Processes*, Waterville Valley, NH, paper P2.13
- [27] Beck, J., and C. C. Weiss, 2006: The role of environmental and computational parameters in the development and impact of the forward-flank gust front in supercell thunderstorms. 23rd Conference on Severe Local Storms, St. Louis, MO, paper P11.6
- [26] Bluestein, H. B., C. C. Weiss, M. M. French, E. M. Holthaus, R. L. Tanamachi, S. Frasier, and A. L. Pazmany, 2006: High-resolution structure of tornadoes in south-central Kansas on 12 May 2004: Analysis of mobile Doppler radar data. 23rd Conference on Severe Local Storms, St. Louis, MO, paper 15.3

- [25] Griesinger, M. P., and C. C. Weiss, 2006: Statistical analysis of variables associated with convective initiation along the southern Plains dryline. 23rd Conference on Severe Local Storms, St. Louis, MO, paper 1.5
- [24] Hirth, B. D., J. L. Schroeder, and C. C. Weiss, 2006: Surface analysis of the rear-flank downdraft in two tornadic supercells. 23rd Conference on Severe Local Storms, St. Louis, MO, paper 14.5
- [23] Houser, J. B., H. B. Bluestein, C. C. Weiss, M. R. Kramar, J. D. Tuttle, and A. Pazmany, 2006: Observations of tornadogenesis from high-resolution reflectivity data using a W-band mobile radar: The Cordell storm of 5 May 2001. 23rd Conference on Severe Local Storms, St. Louis, MO, paper P9.4
- [22] Rogers, J. W., and C. C. Weiss, 2006: Fine-scale mobile mesonet and stick-net observations of a non-tornadic HP supercell near Scottsbluff, NE. 23rd Conference on Severe Local Storms, St. Louis, MO, paper P9.8
- [21] Weiss, C. C., and D. M. Schultz, 2006: Synoptic and mesoscale influences on west Texas dryline development and associated convection. 23rd Conference on Severe Local Storms, St. Louis, MO, paper 2.6
- [20] Bluestein, H. B., E. Holthaus, C. C. Weiss, S. Frasier, and A. L. Pazmany, 2005: High-resolution, mobile, W-band Doppler radar observations of the vertical structure of a tornado near Attica, Kansas on 12 May 2004. 32nd Conference on Radar Meteorology, Albuquerque, NM, paper P15R.2
- [19] Griesinger, M. P., and C. C. Weiss, 2005: Dryline convergence and the initiation of deep moist convection. 11th Conference on Mesoscale Processes, Albuquerque, NM, paper JP3J.16
- [18] Schroeder, J. L., S. Lorsolo, J. Beck, and C. C. Weiss, 2005: Using mobile research radar to extract hurricane boundary layer wind information, *Proceedings*, 10th Americas Conference on Wind Engineering, Baton Rouge, Louisiana.
- [17] Tanamachi, R. L., H. B. Bluestein, M. Bell, W.-C. Lee, A. L. Pazmany, and C. C. Weiss, 2005: The evolution of a tornado: Ground-based velocity track display (GBVTD) analysis of mobile, W-band Doppler radar data on 15 May 1999 near Stockton, Kansas. 32nd Conference on Radar Meteorology, Albuquerque, NM, paper P15R.3

- [16] Walter, K. R., C. C. Weiss, and A. H. Swift, 2005: The moisture route of Palo Duro Canyon. 11th Conference on Mesoscale Processes, Albuquerque, NM, paper JP3J.7
- [15] Weiss, C. C., 2005: High-resolution surface and tower observations of the southern Plains dryline during Project SONDE-2005. 11th Conference on Mesoscale Processes, Albuquerque, NM, paper JP3J.14
- [14] Bluestein, H. B., **C. C. Weiss**, and A. L. Pazmany, 2004: The vertical structure of a tornado: High-resolution, W-band, Doppler-radar observations near Happy, Texas on 5 May 2002. *22nd Conference on Severe Local Storms*, Hyannis, MA, paper 15.2
- [13] Junyent, F., A. L. Pazmany, H. B. Bluestein, M. R. Kramar, M. M. French, C. C. Weiss, and S. Frasier, 2004: Dual-polarization, X-band, mobile Doppler radar observations of hook echoes in supercells. 22nd Conference on Severe Local Storms, Hyannis, MA, paper P11.7.
- [12] Tanamachi, R. L., H. B. Bluestein, C. C. Weiss, M. Bell, W.-C. Lee, and A. Pazmany, 2004: The structure of a tornado: Ground-based velocity track display (GBVTD) analysis of mobile, W-band, Doppler radar data on 15 May 1999 near Stockton, Kansas. 22nd Conference on Severe Local Storms, Hyannis, MA, paper P11.5
- [11] **Weiss, C. C.**, and H. B. Bluestein, 2004: Fine-scale radar observations of a dryline during the International H₂O Project. 84th American Meteorological Society Conference, Sanders Symposium, Seattle, WA, paper P1.18
- [10] **Weiss, C. C.**, H. B. Bluestein, and A. L. Pazmany, 2004: Fine-scale observations of a dryline during the International H₂O Project. 22nd Conference on Severe Local Storms, Hyannis, MA, paper 16A.6
- [9] Weiss, C. C., H. B. Bluestein, and A. L. Pazmany, 2004: A variational pseudo-multiple Doppler radar analysis technique for mobile, ground-based radars. 22nd Conference on Severe Local Storms, Hyannis, MA, paper P7.2
- [8] Bluestein, H. B., C. C. Weiss, and A. L. Pazmany, 2003: Doppler-radar observations of dust devils in Texas. 31st Conference on Radar Meteorology, Seattle, WA, paper P4A.2
- [7] Bluestein, H. B., C. C. Weiss, and A. L. Pazmany, 2003: The vertical structure of the Happy, Texas tornado of 5 May 2002: Mobile, Wband, Doppler-radar observations. 31st Conference on Radar Meteorology, Seattle, WA, paper 8A.1

- [6] Weiss, C. C., H. B. Bluestein, and A. L. Pazmany, 2003: Fine-scale radar observations of a dryline during the International H₂O Project. 10th Conference on Mesoscale Processes, Portland, OR, paper 14.1
- [5] Weiss, C. C., H. B. Bluestein, and A. L. Pazmany, 2003: Fine-scale radar observations of a dryline during the International H₂O Project. 31st Conference on Radar Meteorology, Seattle, WA, paper P5A.8
- [4] Bluestein, H. B., C. C. Weiss, A. L. Pazmany, W.-C. Lee, and M. Bell, 2002: Tornadogenesis and tornado-vortex structure in a supercell. 21st Conference on Severe Local Storms, San Antonio, TX, paper 12.1
- [3] Weiss, C. C., and H. B. Bluestein, 2002: Numerical simulation of a dryline-outflow boundary intersection. 21st Conference on Severe Local Storms, San Antonio, TX, paper 17.2
- [2] Bluestein, H. B., **C. C. Weiss**, A. L. Pazmany, 2001: Observations in supercells with a mobile, 3-mm-wavelength Doppler radar. *30th Conference on Radar Meteorology*, Munich, Germany, paper 5A.2
- [1] Weiss, C. C., and H. B. Bluestein, 2000: Airborne Doppler analysis of a dryline-outflow boundary intersection and subsequent convection. 20th Conference on Severe Local Storms, Orlando, FL, paper 18.4

TEACHING EXPERIENCE

Responsible for the following courses at Texas Tech University:

Graduate Level

ATMO 5316 – *Dynamics of Severe Storms* (Fall 2005, Fall 2007, Fall 2009, Fall 2011, Fall 2013, Fall 2016, Fall 2018, Fall 2020, Fall 2022, Fall 2024) ATMO 5327 – *Radar Meteorology* (Spring 2006, Spring 2008, Spring 2011, Fall 2012, Fall 2014, Fall 2017, Fall 2019, Fall 2023) ATMO 5101 – *Atmospheric Science Seminar* (Spring 2007, Fall 2009-present) GPH 5324 – *Radiative Transfer and Remote Sensing* (Spring 2005, Fall 2006, Fall 2008, Fall 2010)

<u>Undergraduate Level</u>

ATMO 1100 – *Atmospheric Science Lab* (all long semesters) ATMO 1300 – *Introduction to Atmospheric Science* (Spring 2005, Fall 2006, Fall 2007, Fall 2008) ATMO 2316 – Severe and Hazardous Weather (Fall 2004, Spring 2007, Spring 2008, Fall 2008, Fall 2009, Fall 2010, Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2016, Spring 2017, Spring 2018)
ATMO 3316 – Severe and Hazardous Weather (Spring 2019, Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024, Spring 2025)
ATMO 4300 – Independent Studies in Atmospheric Science (Fall 2007, Fall 2009, Spring 2012, Fall 2014, Spring 2015, Spring 2016, Spring 2017)

RESEARCH INTERESTS

Severe thunderstorm dynamics, tornadogenesis, tornado structure, dryline dynamics, convection initiation, instrumentation, radar observations of clear-air boundaries and deep convection, application of unmanned aircraft systems, variational Doppler retrieval techniques, mesoscale and storm-scale modeling, data assimilation

FIELD EXPERIENCE

July 2025 - Maritime to Inland Transitions Towards Environments for Convection Initiation Experiment

April-June 2024 – Low-level Internal Flow of Tornadoes Experiment

May-June 2023 – PI for the Targeted Observation by Radars and UAS of Supercells (TORUS) field project

Feb-Apr 2023 – PI for the Propagation and Evolution of Rotation in Linear Systems (PERiLS) experiment

May-June 2022 – PI for the Targeted Observation by Radars and UAS of Supercells (TORUS) field project

Mar-Apr 2022 – PI for the Propagation and Evolution of Rotation in Linear Systems (PERiLS) experiment

May-June 2019 – PI for the Targeted Observation by Radars and UAS of Supercells (TORUS) field project

December 2018 – April 2019 – PI for StickNet deployments in northern Alabama / southern Tennessee as part of the VORTEX-SE Meso18-19 field project

May/June 2018 – Field coordinator for TTUKa radar deployments in the NSF National Robotics Initiative field project

May/June 2017 – Field coordinator for TTUKa radar deployments in the RiVorS project

Mar/Apr 2017 – Field coordinator for StickNet deployments during the Verification of the Origin of Rotation in Tornadoes – Southeast (VORTEX-SE) Experiment

Mar/Apr 2016 – Field coordinator for StickNet deployments during the Verification of the Origin of Rotation in Tornadoes – Southeast (VORTEX-SE) Experiment

Jun 2015 – Radar coordinator for Air Force Office of Scientific Research project coordinating real-time dual-Doppler data with unmanned aircraft flights

Aug 2014 – TTUKa coordinator for integrated radar / unmanned aircraft system demonstration (Colorado); objectives tied to a grant from the Air Force Office of Scientific Research

Spring 2012-2015 – Field coordinator for tornadic supercell intercepts in various ad hoc campaigns with TTUKa radars

Spring 2011 – Field Coordinator for the Severe Convective Outflow from Thunderstorms (SCOUT) Project (coordinated StickNet/TTUKa deployments)

Spring 2010 – PI, StickNet, TTUKa Coordinator in the Verification of the Origin of Rotation in Tornadoes Experiment 2 (VORTEX2) Project

Spring 2009 – PI and StickNet Coordinator in the Verification of the Origin of Rotation in Tornadoes Experiment 2 (VORTEX2) Project

Spring 2006-2008 – Field Coordinator for the Multiple Observations of Boundaries in the Local Storm Environment (MOBILE) Project

Spring 2005-2006 – Designed and participated in the Simultaneous Observations of the Near-Dryline Environment (SONDE) Project

Spring 2005 – Participated in the Wheeled Investigation of RFD Lifecycle (WIRL) Project

Aug 2004 – Participation in the Hurricanes at Landfall Experiment (HALE). Operated S-band SMART-R in the intercept of Hurricane Frances (Titusville, FL).

1997-2004 – Graduate Research Assistant, University of Oklahoma

Spring 1998-2004 – University of Massachusetts W-band (95 GHz) radar project

- * Lead radar operator (2000-2004)
- * Backup radar operator (1998-1999)

Spring 2002 – International H₂O Project (IHOP)

Spring 1998 – Doppler on Wheels (DOW) project

Spring 1998 – Sub-VORTEX project

STUDENTS ADVISED

Ph.D./M.S.

2005-2009 2024-present 2023-present 2012-2014 2009-2011 2007-2010 2021-2023 2004-2006 2013-2015 2012-2014 2014-2019 2006-2013 2024-present 2015-2017 2017-2021 2017-2019 2019-2024 2009-2011 2021-2023 2023-present 2011-2014 2009-2016 2009-2012 2006-2007 2016-2018 2018-2024 2009-2013	Jeff Beck (Ph.D., Geosciences) Michael Brown (M.S., ATMO) Julia Buhrman (M.S., ATMO) Timothy Cermak (M.S., ATMO) Brad Charboneau (M.S. candidate, ATMO) Joel Dreessen (M.S., ATMO) William Faletti (M.S., ATMO) Michael Griesinger (M.S., ATMO) Aaron Hill (M.S., ATMO) Aaron Hill (M.S., ATMO) Aaron Hill (Ph.D., Geosciences) Kate Horgan (M.S. candidate, ATMO) Cassie Isenberger (M.S., ATMO) Abby Kenyon (M.S., ATMO) Abby Hutson (Kenyon) (Ph.D., Geosciences) Jessica McDonald (M.S., ATMO) Jessica McDonald (Ph.D., Geosciences) Ryan Metzger (M.S., ATMO) Joshua Ostaszewski (M.S., ATMO) Joshua Ostaszewski (Ph.D., Geosciences) Paul Prososki (M.S., ATMO) Anthony Reinhart (Ph.D., Geosciences) Amber Emory (Reynolds) (Ph.D., Wind Science and Engineering) Jaret Rogers (M.S., ATMO) Alex Schueth (M.S., ATMO) Patrick Skinner (M.S., ATMO) Patrick Skinner (Ph.D., Wind Science and Engineering)
2024-present 2019-2021	Ethan Steward (M.S., ATMO) Elizabeth Venteicher (M.S. candidate, ATMO)
2004-2007	Kevin Walter (Ph.D., IGERT)

<u>Undergraduates</u>

2007-2008	Trevor Boucher (B.S., Geophysics) {Senior Thesis Project}
2009	Eric Boyd (B.S., Geophysics)
2017	Taylor Brooks (B.S., Geophysics) {Senior Thesis Project}
2007-2008	Isaac Medina (B.S., Geophysics) {Senior Thesis Project}
2014-2015	Timothy Mueller (B.S., Geophysics) {Senior Thesis Project}
2011-2012	Jennifer Nauert (B.S., Geophysics) {Senior Thesis Project}
2011-2012	Heather Wood (B.S., Geophysics) {Senior Thesis Project}

DISSERTATION/THESIS COMMITTEES SERVED

Taylor Adams, M.S. (2020)

Isaac Arseneau, M.S. (2020-2021)

Isaac Arseneau, Ph.D. (2022-present)

Jeff Beck, Ph.D. (2005-2009) (Chair)

Chris Bednarczyk, M.S. (2012-2013)

Samantha Berkseth, M.S. (2016)

Trevor Boucher, M.S. (2009-2010)

Christian Boyer, M.S. (2019)

Michael Brown, M.S. (2024-present) (Chair)

Julia Buhrman, M.S. (2023-present) (Chair)

Brock Burghardt, Ph.D. (2014-2017)

Chris Burling, M.S. (2009-2010)

Timothy Cermak, M.S. (2012-2014) (Chair)

Brad Charboneau, M.S. (2009-2012) (Chair)

Blake Checkoway, Ph.D. (2024-present)

Austin Coleman, M.S. (2017-2018)

Austin Coleman, Ph.D. (2018-2023)

Candace Cyrek, M.S. (2008-2018)

Vanna Chmielewski, Ph.D. (2015-2017)

Joel Dreessen, M.S. (2007-2010) (Chair)

Jilliann Dufort, M.S. (2022)

William Faletti, M.S. (2021-2023) (Chair)

Jannick Fischer, Ph.D. (2019-2022)

Mike Griesinger, M.S. (2004-2006) (Chair)

Casey Griffin, M.S. (2013-2015) (Chair)

Scott Gunter, M.S. (2010)

Scott Gunter, Ph.D. (2012-2016)

Natalie Gusack, M.S. (2011-2012)

Aaron Hill, M.S., (2012-2014) (Chair)

Aaron Hill, Ph.D., (2014-2019) (Chair)

Brian Hirth, Ph.D. (2008-2011)

Brian Hirth, M.S. (2004-2005)

Michael Hollan, M.S. (2012-2013)

Kate Horgan, M.S. (2006-2013) (Chair)

Abby Hutson (Kenyon), Ph.D., (2017-2021) (Chair)

Abby Hutson (Kenyon), M.S. (2015-2017) (Chair)

Cassie Isenberger, M.S. (2024-present) (Chair)

Steve Latimer, M.S. (2004-2005)

Jianjun Luo, Ph.D. (2014)

Matthew Mahalik, M.S. (2014-2015)

Jessica McDonald, Ph.D. (2019-2024) (Chair)

Jessica McDonald, M.S. (2017-2019) (Chair)

Zach Medley, M.S. (2023-2024)

Ryan Metzger, M.S. (2009-2011) (Chair)

David Newbern, M.S. (2020)

Cameron Nixon, M.S. (2019)

Ryan Opperman, M.S. (2005-2007)

Joshua Ostaszewski, Ph.D. (2023-present) (Chair)

Joshua Ostaszewski, M.S. (2021-2023) (Chair)

Camaron Plourde, M.S. (2012-2013)

Paul Prososki, M.S. (2011-2014) (Chair)

Anthony Reinhart, Ph.D. (2009-2016) (Chair)

Amber Reynolds, Ph.D. (2009-2012) (Chair)

Shelby Robertson, M.S. (2016-2017)

Jaret Rogers, M.S. (2005-2007) (Chair)

Archimedes Ruiz, Ph.D. (2006-2008)

Vicente Salinas, M.S. (2016)

Vicente Salinas, Ph.D. (2019-2020)

Matt Schmidt, M.S. (2008-2010)

Alex Schueth, Ph.D. (2018-2024) (Chair)

Alex Schueth, M.S. (2016-2018) (Chair)

David Singewald, M.S. (2023-)

Patrick Skinner, M.S. (2006-2009) (Chair)

Patrick Skinner, Ph.D. (2009-2013) (Chair)

Timothy Sliwinski, M.S. (2012-2013)

Timothy Sliwinski, Ph.D. (2013-2017)

Ethan Steward, M.S. (2024-present) (Chair)

Brandon Storm, Ph.D. (2006-2008)

Vanna Sullivan, M.S. (2012-2013)

Karen Tarara, Ph.D. (2010)

Amanda Thibault, M.S. (2009-2010)

Jake Vancil, M.S. (2018-2018)

Andrew VandeGuchte, M.S. (2016)

Rolando Vega, Ph.D. (2006-2008)

Elizabeth Venteicher (2019-2021) (Chair)

Phillip Ware, M.S. (2014-2015)

Kevin Walter, Ph.D. (2004-2008) (Chair)

Liang Wu, Ph.D. (2016-2019)

ORGANIZATIONS AND SERVICE

American Meteorological Society (AMS) – Student Member (1998-2005)

Member (2006-present)

Cooperative Institute for Severe and High Impact Weather Research and Operations (CIWRO) – Council of Fellows (2022 – present)

Member of the Overall Planning Committee for the 2026 AMS Annual Meeting (2024-present)

Member of European Severe Storms Laboratory Advisory Council (2024-present)

40th AMS Radar Conference (2023) – Topical Chair for Severe Storms, Chair of Student Presentation Judging Committee

VORTEX-SE Scientific Steering Committee – Member (2016-2022)

10th European Conference on Severe Storms – jury member for oral and poster presentations (2019)

University Corporation for Atmospheric Research (UCAR) – Member Representative (2006-present)

Member of University of Michigan Department of Climate and Space Sciences and Engineering Advisory Board (2016-present)

American Association for Wind Engineering (2005-present)

Associate Member, ASCE EF-scale Radar Subcommittee (2015-2022)

Program Co-Chairman for the 25th AMS Conference on Severe Local Storms, 2010

Program Committee Member for the 35th AMS Conference on Radar Meteorology, 2011

AMS Network of Networks Radar Metadata Subcommittee Member, 2010

AMS Scientific and Technological Activities Commission: Member of Radar Meteorology Committee (2007-2010)

AMS Scientific and Technological Activities Commission: Member of Severe Local Storms Committee (2011-2017)

Collegiate Weather Forecasting Challenge ("WxChallenge")

Co-founder, Local Manager, member of National Advisory Board (2005-present)

Texas Tech Lutheran Student Fellowship: Faculty Advisor (2005-present)

LITERATURE AND PROPOSAL REVIEWS

Editor, Monthly Weather Review (2017-present)

Associate Editor, Monthly Weather Review (2015-2016)

Reviewer for multiple journals, including Journal of Atmospheric Science, Monthly Weather Review, Weather and Forecasting, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Oceanic Technology (American Meteorological Society) and Advances in Meteorology Reviewer for proposals submitted to the National Science Foundation and the National Oceanic and Atmospheric Administration

INTERNAL SERVICE (selected examples)

Chair of Promotion Committee, Eric Bruning (2022)

Chair of Promotion Committee, Brian Ancell (2022)

Chair of Tenure and Promotion Committee, Sandip Pal (2022)

Atmospheric Science Graduate Advisor (Fall 2009 – present)

Third-year Review Committee Chair for Karin Ardon-Dryer, 2020

Search Committee Member, Boundary Layer, 2017

Search Committee Chair, Climate Systems, 2016

Search Committee Member, National Wind Institute Director, 2016

Texas Tech Graduate Council Representative (Sciences and Mathematics), 2014-2018

Search Committee Chair, Dynamic Meteorology, 2013

Search Committee Chair, Climate Systems, 2013

Department of Geosciences Strategic Plan Development Committee (2011-2012)

Internal Advisory Board, National Wind Institute (2013-present)

Department of Geosciences Awards Committee (2011-present)

Department of Geosciences Executive Committee (2011 – present)

Search Committee Chair, Microphysics/Lightning position, 2010

Search Committee Member, Numerical Weather Prediction position, 2009

TA Coordinator (Spring 2009 – Spring 2011, Spring 2013)

College of Arts and Sciences Newsletter Coordinator (2009-2012)

Organization Committee for Geosciences Research Day (2009)

TTU Internal NSF MRI Review Panel (2007)

Search Committee Member for Geosciences Mineralogy position (2007)

Search Committee Member for Atmospheric Science Microphysics position (2006-2007)

Geosciences Chair Discernment Committee (2007)

GEO Travel Committee (2006)

INTERVIEWS

5-15-24	Interview with BBC regarding tornado shelters
2-29-24	Interview with RTVI International regarding spring tornadoes
11-29-23	Interview with TTU media and communications about LIFT project
6-30-23	Interview with Lubbock Avalanche-Journal about tornado frequency
4-1-23	Interview with NBC News about PERiLS, tornadoes
1-25-23	Interview with NBC regarding Houston tornadoes, climate change
9-8-22	Interview with New York Times about TORUS project
4-13-22	Photo shoot with Wall Street Journal (in field for PERiLS)
4-13-22	Interview with Newsweek about tornadoes
3-30-22	Interview with KXAN (Austin) about low-level wind fields in tornadoes, PERiLS project
3-23-22	Interview with KAMC (Lubbock) about tornadoes
12-16-21	Interview with FOX34 (KCBD) about severe storms research and
12-10-21	facilities at Reese
12-16-21	Interview with USA Today about KY/TN tornado outbreak
12-13-21	Interview with NBC News re: KY/TN tornado outbreak
12-13-21	Interview with Tennessee Star Report re: KY/TN tornado outbreak
6-24-21	Interview with FOX34 (KCBD) about CISHIWRO
1-24-21	Interview with Daily Toreador re: winter storm
11-1-19	Interview with Associated Press regarding VORTEX-SE
10-21-19	Interview with the Texas Observer (climate change/tornadoes)
12-12-18	Interview with Texas Tech College of Arts & Sciences Alumni
12 12 10	magazine
4-4-18	Interview with the Amarillo Globe regarding 2018 tornado season
4-4-18	Interview with the University of Michigan regarding tornado
	dynamics
8-9-17	Interview with Philadelphia Inquirer on tornado warning false alarm
	rates
3-24-17	Interview with Texas Tech Media and Communications regarding VORTEX-SE
2-14-17	Daily Torreador Interview regarding tornadoes
12-1-16	Interviewed by KCBD-TV regarding NSF NRI drone project
3-31-16	In-field interview with CNN (VORTEX-SE)
2-29-16	Live interviews with The Weather Channel, covering the VORTEX-SE project

9-2-15	Interviewed by KRLD radio (Dallas, TX) regarding NSF NRI project
3 2 13	involving severe storms and unmanned aircraft.
5-21-15	Interviewed by WORT-FM (Madison, WI) on tornado science
6-17-14	Live interview by FOX34 regarding twin-tornado event in Nebraska
4-28-14	Interviewed by FOX34 regarding tornadoes in Arkansas
4-10-14	Interviewed by KTTZ (Inside Texas Tech) regarding 1970 Lubbock
	tornado, current research
5-24-13	Interviewed by NTV Russia
5-22-13	Interviewed by KLIF news radio in Dallas/Ft. Worth
5-22-13	Interviewed by FOX34 News regarding Moore, OK tornado
5-17-13	Interviewed by ABC World News with Diane Sawyer
5-16-13	Interviewed by Dallas Star-Telegram (Granbury, TX tornado)
9-20-12	Interviewed by BBC for children's series "Earthshock"
5-10-12	Interviewed by The Weather Channel, an update on VORTEX2
4.45.40	research
4-15-12	Interviewed by KCBD-TV about tornado research in Oklahoma
4-4-12	Interviewed by Dallas Star-Telegram regarding tornadoes that
0.00.44	impacted DFW area on 4/3/12
8-20-11	Interviewed by NOVA regarding tornado dynamics and 2011
4-28-11	tornado season, aired in 2012: "Deadliest Tornadoes"
4-20-11	Interviews with LA Times, AP and St. Louis Post-Dispatch regarding Tuscaloosa, AL tornado.
4/10-6/10	Multiple (~40) interviews with The Weather Channel as part of
-1 /10-0/10	VORTEX2 field project
4/10-6/10	Interviews with TTU Office of Communications and Marketing
.,	regarding VORTEX2.
3/10	Interview with the Illinois Farm Bureau Radio Network
1-26-10	Interview with NEWS 8 Austin regarding TTU tornado research
8-4-09	TV interview as part of DYI Deconstruction Series
5/09-6/09	Multiple (~30) interviews with The Weather Channel, USA Today,
	local newspaper and TV stations as part of VORTEX2 field project.
8-15-08	Phone interview with Fort Worth Business Journal regarding
	tornado research
1-11-08	Phone interview with Discovery Channel Canada re: early season
	tornadoes / global warming link
5-23-07	Interviewed by Discovery Channel ("Storm Chasers" series)
5-30-06	Newspaper interview with High Plains Journal (Dodge City, KS)
5-17-06,5-18	•
5-9-06	Interviewed by CNN regarding StickNet project (Rob Marciano)
5/06-6/06 4-20-06	Shadowed by The Discovery Channel during field operations
4-20-06 1-25-06	Interviewed with WMC-TV (Memphis) regarding tornado research
1-25-06	TV interview with FOX16 (Little Rock, AR) TV interview with WHNT-TV (Huntsville, AL)
1-25-06	TV interview with WHNT-TV (Huntsville, AL) TV interview for The History Channel
12-12-05	Phone interview with Indigo Films (re: upcoming 2006 field project
12 12 00	film)
9-28-05	Interview with Jessica Elliott (TTU student) re: Hurricane Katrina
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9-23-05	Phone interview with San Antonio Express News (re: Hurricane Rita)
9-22-05	Phone interview with San Jose Mercury News (re: Hurricane Rita)
9-20-05	Interviewed for Daily Torreador (re: Hurricane Katrina/Rita)
8-10-05	Appearance on National Geographic Television Channel ("Thrill
	Zone: The Tornado Hunters")
6-28-05	Phone interview with Chad Bull (TTU University Daily) re: hail
	storms
6-27-05	Interview with Carmina Aguilar, TTU journalism student, re:
	tornadoes
6-22-05	Interview with Granada Television re: tornado formation
5-26-05	Phone interview with Cory Chandler (Communications and
	Marketing) re: TTU hurricane research
5-25-05	Phone interview with Garneth Williams (Granada Television (UK))
5-12-05	National Geographic field interview
5-7-05	National Geographic field interview
4-30-05	Lubbock Avalanche Journal – re: tornadoes (published 5/11/05)
4-29-05	Outdoor Living Network – re: tornadoes
9-10-04	Texas Cable News Network – radio interview re: Hurricane Frances
9-10-04	FOX-34 TV interview with Dr. Kishor Mehta re: Hurricane Frances
8-27-04	National Geographic re: tornadoes, damage

CONFERENCES ATTENDED

11/16	28th AMS Conference on Severe Local Storms (Portland, OR)
11/16	VORTEX-SE Workshop (Portland, OR)
10/16	UCAR Members Meeting (Boulder, CO)
10/16	AMS/AGU Heads and Chairs Meeting (Boulder, CO)
11/15	VORTEX-SE Workshop (Huntsville, AL)
10/15	UCAR Members Meeting (Boulder, CO)
9/15	8th European Conference on Severe Storms (Wiener Neustadt,
	Austria)
11/14	27th AMS Conference on Severe Local Storms (Madison, WI)
10/14	UCAR Members Meeting, AGU Heads and Chairs Meeting
	(Boulder, CO)
2/14	AMS Annual Meeting (Atlanta, GA)
9/13	36 th AMS Conference on Radar Meteorology (Breckenridge, CO)
6/13	7 th European Conference on Severe Storms (Helsinki, Finland)
4/13	VORTEX2 Workshop (Austin, TX)
1/13	AMS Annual Meeting (Austin, TX)
11/12	AMS SLS Conference (Nashville, TN)
10/12	UCAR Members Meeting (Boulder, CO)
10/12	AMS/AGU Heads and Chairs Meeting (Boulder, CO)
1/12	AMS Annual Meeting (New Orleans, LA)
9/11	35 th AMS Conference on Radar Meteorology (Pittsburgh, PA)
3/11	15 th Severe Storms and Doppler Radar Conference (Ames, IA)
2/11	9 th Great Lakes Meteorology Conference (Valparaiso, IN)
1/11	AMS Annual Meeting (Seattle, WA)
10/10	AMS SLS Conference (Denver, CO)
10/10	UCAR Members Meeting, AGU Heads and Chairs Meeting
	(Boulder, CO)
2/10	Lubbock Severe Weather Conference (Lubbock, TX)
1/10	AMS Annual Meeting (Atlanta, GA)
10/09	UCAR Members Meeting (Boulder, CO)
4/09	Pacific Northwest Association of College Physics (Auburn, WA)
4/09	NSF Course, Curriculum and Laboratory Improvement Workshop
	(Norman, OK)
1/09	AMS Annual Meeting (Phoenix, AZ)
10/08	AMS SLS Conference (Savannah, GA)
10/08	UCAR Members Meeting, AGU Heads and Chairs Meeting
	(Boulder, CO)
2/08	SMART-R Annual Meeting (College Station, TX)
1/08	AMS Annual Meeting (New Orleans, LA)
10/07	UCAR Members Meeting (Boulder, CO)
7/07	AMS Mesoscale Conference (Waterville Valley, NH)
2/07	AMS Annual Meeting (San Antonio, TX)
1/07	SMART-R Annual Meeting (Lubbock, TX)
11/06	AMS SLS Conference (St. Louis, MO)
10/06	UCAR Members Meeting (Boulder, CO)
1/06	AMS Annual Meeting (Atlanta, GA)
12/05	SMART-R Annual Meeting (Norman, OK)
10/05	AMS Mesoscale Conference (Albuquerque, NM)

10/05	UCAR Members Meeting (Boulder, CO)
1/05	AMS Annual Meeting (San Diego, CA)
10/04	AMS Severe Local Storms (SLS) Conference (Hyannis, MA)
8/04	SMART-R Annual Meeting (Norman, OK)