Michael M. French

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Professional Experience

Assistant Professor **1/15-present**
Stony Brook University, School of Marine and Atmospheric Sciences

Postdoctoral Scientist **8/14-11/14**
Cooperative Institute for Mesoscale Meteorological Studies and The Univ. of Oklahoma

National Research Council Postdoctoral Research Associate **08/12-7/14**
National Severe Storms Laboratory, Forecast Research & Development Division
Topic: Polarimetric features and precipitation properties of tornadic and nontornadic supercells observed in VORTEX2
Sponsor: Louis J. Wicker

Education

University of Oklahoma, Norman, Oklahoma **05/12**
Ph.D. in Meteorology
Dissertation Title: Mobile, Phased-Array, Doppler Radar Observations of Tornadoes at X Band
Advisor: Howard B. Bluestein

University of Oklahoma, Norman, Oklahoma **05/06**
M.S. in Meteorology
Thesis Title: The 15 May 2003 Shamrock, Texas Supercell: A Dual-Doppler Analysis and EnKF Data Assimilation Experiment
GPA: 3.92

Cornell University, Ithaca, New York **05/03**
B.S. in Atmospheric Sciences, Magna Cum Laude
GPA: 3.64

Research

Grants

- Title: Nowcasting Severe Storm Evolution and Tracking Storm Life Cycles in the Northeast United States Using GOES-R (Lead PI)
  Amount: $444,234 Period covered: 09/01/2015-8/31/2018
  Support: Active Source: NASA

Peer Review

- Reviewer, *Advances in Atmospheric Sciences*, *Atmosphere*, *Bulletin of the American Meteorological Society, International Journal of Climate, Monthly Weather Review, Journal of Geophysical Research, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Oceanic Technology,* and *Weather & Forecasting*
- Proposal reviewer, VORTEX-SE (2015)
- Proposal reviewer, VORTEX-SE (2016)
- Proposal reviewer, NSF: AGS–PDM (2017)

Invited Talks

- 29 April 2016, University of Connecticut – Avery Point: "Observations of Supercells and Tornadoes Using Emerging Radar Technologies"
- 11 May 2016, Cornell University: "Observational Insight Into Tornado Processes Using Phased-Array and Dual-Polarization Mobile Doppler Radars"

Teaching Experience

Instructor **08/15-present**

School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, New York

- ATM 205: Introduction to Atmospheric Sciences, Fall, 2015–17
- ATM 247: Atmospheric Structure and Analysis, Spring 2016
- MAR 595: Graduate Seminar in Atmospheric Sciences, Spring 2016
- ATM 383 / MAR583: Doppler Weather Radar, Spring 2017

Publications

Peer Review Papers

Bluestein, Howard. B., and **M. M. French**, J. C. Snyder, and J. B. Houser, 2016: Doppler-radar observations of anticyclonic tornadoes in cyclonically rotating, right-moving supercells. *Mon Wea. Rev.*, **144**, 1591-1616.

Supinie, Timothy A., Y. Jung, M. Xue, D. J. Stensrud, **M. M. French**, and H. B. Bluestein, 2016: Impact of VORTEX2 observations on analyses and forecasts of the 5 June 2009 Goshen County, Wyoming, supercell. *Mon. Wea. Rev.,* **144***,* 429-449.

French, Michael M., P. S. Skinner, L. J. Wicker, and H. B. Bluestein, 2015: Documenting a rare tornado merger observed in the 24 May 2011 El Reno-Piedmont, Oklahoma supercell. *Mon. Wea. Rev.*, **143**, 3025-3043.

French, Michael M., L. J. Wicker, D. W. Burgess, and E. R. Mansell, 2015: Bulk hook echo raindrop sizes retrieved using mobile, polarimetric Doppler radar observations. *J. Appl. Meteor. Climatol.*, **54**, 423-450.

Peer Review Papers, continued

Skinner, Patrick 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.

French, Michael M., H. B. Bluestein, I. PopStefanija, C. A. Baldi, and R. T. Bluth, 2014: Mobile, phased-array, Doppler radar observations of tornadoes at X band. *Mon. Wea. Rev.,* **142**, 1010-1036.

Bluestein, Howard B., J. B. Houser, **M. M. French**, J. C. Snyder, G. D. Emmitt, I. PopStefanija, C. A. Baldi, and R. T. Bluth, 2014: Observations of the boundary layer near tornadoes and in supercells using a mobile, co-located, pulsed Doppler lidar and radar. *J. Atmos. Oceanic Technol.*, **31**, 302-325.

French, Michael M., H. B. Bluestein, I. PopStefanija, C. A. Baldi, and R. T. Bluth, 2013: Reexamining the vertical development of Tornadic Vortex Signatures in supercells. *Mon. Wea. Rev*., **141**, 4576-4601.

Bluestein, Howard B., **M. M. French**, I. PopStefanija, R. T. Bluth, and J. B. Knorr, 2010: A mobile, phased-array Doppler radar for the study of severe convective storms. *Bull. Amer. Meteor. Soc.*, **91**, 579–600.

French, Michael M., H. B. Bluestein, L. J. Wicker, D. C. Dowell, and M. R. Kramar, 2009: An example of the use of mobile, Doppler radar data for tornado verification. *Wea. Forecasting*, **24**, 884–891.

French, Michael M., H. B. Bluestein, D. C. Dowell, L. J. Wicker, M. R. Kramar, and A. L. Pazmany, 2008: High-resolution, mobile Doppler radar observations of cyclic mesocyclogenesis in a supercell. *Mon. Wea. Rev.*, **136**, 4997–5016.

Bluestein, Howard B., **M. M. French**, R. L. Tanamachi, S. Frasier, K. Hardwick, F. Junyent, and A. L. Pazmany, 2007: Close-range observations of tornadoes in supercells made with a dual-polarization, X-band, mobile Doppler radar. *Mon. Wea. Rev.*, **135**, 1522–1543.

Bluestein, Howard 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.

Peer Review Papers, in preparation

French, Michael M., and D. M. Kingfield, 2017: Dissipation characteristics of Tornadic Vortex Signatures associated with long-duration tornadoes. To be submitted to *Wea. Forecasting.*

Awards

University of Oklahoma Alumni Fellow	08/06-05/11

Society and Committee Affiliations

American Meteorological Society (AMS)	2002-present
Co-President, Cornell Chapter of the AMS	05/02-05/03
Program Committee, 27th AMS Severe Local Storms Conference	2014
Program Committee, 28th AMS Severe Local Storms Conference	2016