

Scott M. Ellis

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Education

- Ph.D. University of Colorado 2010, Atmospheric Science
- Master of Science University of Oklahoma 1997, Meteorology.
- Bachelor of Science University of Oklahoma 1994, Meteorology, minor in Mathematics.

Professional Experience

National Center for Atmospheric research, Boulder CO.

- Project Scientist I, 2015 - present
- Associate Scientist III, 2005– 2015.
- Associate Scientist II, 2000 – 2005.
- Associate Scientist I, 1997– 2000.

Center for Analysis and Prediction of Storms (CAPS), Norman OK.

- Graduate research assistant, 1994 – 1997.
- Undergraduate student research assistant, 1992 – 1994.

Research interests

Dr. Ellis' recent research interests focus on radar data quality and retrievals of physical quantities from radar data such as microphysical characteristics. He worked as an undergraduate on the problem of single Doppler 3D velocity retrievals and his Master of Science thesis investigated radar data assimilation into meso-scale models.

Dr. Ellis has been on the NCAR NEXRAD data quality team since 1997. This team has developed several algorithms that mitigate ground clutter contamination and range/velocity ambiguities. These algorithms have been implemented on the National Weather Service NEXRAD operational radar network. Dr. Ellis also worked to help develop an absolute calibration of reflectivity using the dual-polarimetric self-consistency principle. Dr. Ellis has experience with dual-polarimetric rainfall estimation and drop size distribution retrievals and their verification. He has also worked with dual-polarimetric radar microphysical retrievals. He developed new techniques to retrieve environmental humidity and total liquid water content from dual-wavelength S-band and K_a -band radar data. Dr. Ellis also recently developed a new X-band rainfall attenuation correction method. He is also currently working to detect aircraft icing hazard with dual-polarimetric radars. Dr. Ellis is most recently working with the development team of the HIAPER Cloud Radar, which is a W-band airborne, dual-polarization, research Doppler radar.

Field Campaigns Supported

- CSET: Cloud Systems Evolution in the Trades, 2015.
- PECAN: Plains Elevated Convection At Night, 2015.
- Nor'easter: Winter storm observations using HCR.
- FRONT-ROSE: Radar Observations of Storms for Education, 2014 *Project Manager for NCAR S-Pol radar*
- DYNAMO: Dynamics of the Madden-Julian Oscillation, 2011/2012 *Project Manager for NCAR S-PolKa radar*
- TiMREX: Terrain-induced Monsoon Rainfall Experiment, 2008
- REFRACTT06: Refractivity Experiment for H2O Research and Collaborative Operational Technology Transfer, 2006 *Co-Principle Investigator.*
- REFRACTT05: Refractivity Experiment for H2O Research and Collaborative Operational Technology Transfer, 2005
- RICO: Rain In Cumulus over the Ocean, 2004/2005
- NAME: North American Monsoon Experiment, 2004
- WISP04: Winter Icing and Storms Project, 2004
- BAMEX: Bow Echo and Mesoscale Convective Vortex Experiment, 2003
- IHOP: International H2O Project, 2002
- IMPROVE-II: Improvement of Microphysical PaRameterization through Observational Verification Experiment II, 2001
- IMPROVE: Improvement of Microphysical PaRameterization through Observational Verification Experiment, 2001
- STEPS: Severe Thunderstorm Electrification and Precipitation Study, 2000
- MAP: Mesoscale Alpine Programme, 1999
- TRMM-LBA: Tropical Rainfall Measuring Mission, Large-scale Biosphere-Atmosphere, 1999
- PRECIP98: Precipitation Project, 1998

Recent Awards and Committees

- AMS Radar STAC Committee member, 2015 to present
- Co-convener, 38th AMS Conference on Radar Meteorology
- Associate Editor, AMS Journal of Applied Meteorology and Climatology, January 2012 – present
- NCAR Early Career Scientist Assembly Steering Committee, 2011 – 2015
- 35th AMS Conference on Radar Meteorology Program Committee, 2011
- U.S. Department of Energy Atmospheric System Research Review Panel, 2010
- NCAR Scientific and Technical Advancement Award, 2009
- NCAR Special Recognition Award for Extensive Leadership and Volunteer Service in with the Earth Observing Laboratory Science Group, 2006

Invited Talks

- Ellis, S.M. 2015: A bird's-eye view of a winter storm: The HIAPER Cloud Radar probes a Nor'easter. NCAR Networking and Discovery Day, 17 April 2015.
- Ellis, S.M. 2012: Multiple-Wavelength Radars: Assessment and Future Role. NSF Community Workshop on Radar Technologies, Boulder CO, 27 November 2012.
- Ellis, S.M. 2013: The NCAR S-band Dual-polarimetric, Dual-wavelength S-PolKa Radar: A Unique Radar Platform Serving the Science Community. NCAR/ASP Seminar Series, Boulder CO, April 17, 2013.

Education and Outreach

- Organizer of DYNAMO Student Radar Workshop, Boulder CO, 2011
- Organizer of TIMREX International Student Radar Workshop, Ping Tung Taiwan, 2008
- Scientific mentor with the SOARS summer program, 2006
- EOL career development mentor for 2 EOL staff members

Publications

Refereed:

Martini, A., N. Viltard, S. M. Ellis, and E. Fontaine, 2015: Ice microphysics retrieval in the convective systems of the Indian Ocean during the CINDY-DYNAMO campaign. *Atmospheric Research*, doi:10.1016/j.atmosres.2014.12.013.

Sahoo, S., X. Bosch-Lluis, S.C. Reising, S.M. Ellis, J. Vivekanandan, P. Zuidema, 2015: Retrieval of Slant Water Vapor Path and Slant Liquid Water from Microwave Radiometer Measurements during the DYNAMO Experiment. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, pp. 1 – 10, doi: 10.1109/JSTARS.2015.2445785

Vivekanandan, J., S. M. Ellis, P. Tsai, E. Loew, W.-C. Lee, J. Emmett, M. Dixon, C. Burghart and S. Rauenbuehler, 2015: A wing pod-based millimeter wavelength airborne cloud radar, *Geosci. Instrum. Method. Data Syst.*, **4**, 161-176, doi:10.5194/gi-4-161-2015.

Hubbert, J.C., S.M. Ellis, W. Chang, S. Rutledge and M. Dixon, 2014: Modeling and Interpretation of S-Band Ice Crystal Depolarization Signatures from Data Obtained by Simultaneously Transmitting Horizontally and Vertically Polarized Fields. *J. Atmos. Oceanic Technol.* **53**, Issue 6, pp. 1659-1677 doi: <http://dx.doi.org/10.1175/JAMC-D-13-0158.1>.

Kalina E., K. Friedrich; S. M. Ellis; D. Burgess, 2014: Comparison of Disdrometer and X-band Mobile Radar Observations in Convective Precipitation. *Mon. Wea. Rev.*, **142**, 2414–2435. doi: <http://dx.doi.org/10.1175/MWR-D-14-00039.1>

- Hubbert, J.C., S.M. Ellis, W. Chang, Liou, Y. C., 2014: X-band Polarimetric Observations of Cross-Coupling in the Ice Phase of Convective Storms in Taiwan. *J. Atmos. Oceanic Technol.* **53**, Issue 6, pp. 1678-1695 doi: <http://dx.doi.org/10.1175/JAMC-D-13-0360.1>.
- Feng, Z., S. A. McFarlane, C. Schumacher and S. Ellis, 2013: Constructing A Merged Cloud-Precipitation Radar Dataset for Tropical Convective Clouds during the DYNAMO/AMIE Experiment at Addu Atoll. *J. Atmos. Oceanic Technol.* **31**, 1021–1042.
doi: <http://dx.doi.org/10.1175/JTECH-D-13-00132.1>
- Bluestein, H. B., R. M. Rauber, D. W. Burgess, B. Albrecht, S. M. Ellis, Y. P. Richardson, D. P. Jorgensen, S. J. Frasier, P. Chilson, R. D. Palmer, S. E. Yuter, W.-C. Lee, D. C. Dowell, P. Smith, P. Markowski, K. Friedrich and T. Weckwerth, 2014: Summary of the 2012 National Science Foundation Community Workshop on Radar Technologies. *Bull. Amer. Meteor. Soc.*, In Press.
- Ellis, S. M. and J. Vivekanandan, 2011: Liquid water content estimates using simultaneous S and K_a-band radar measurements. *Radio Sci.*, **46**, RS2021, doi:10.1029/2010RS004361.
- Ellis, S. M. and J. Vivekanandan, 2010: Water Vapor Estimates Using Simultaneous Dual-wavelength Radar Observations. *Radio Sci.*, **45**, doi:10.1029/2009RS004280.
- Hubbert J.C., S. Ellis, M. Dixon and G. Meymaris, 2010: Modeling, error analysis and evaluation of dual polarization variables obtained from simultaneous horizontal and vertical polarization transmit radar. Part I: Modeling errors caused by cross-coupling. *J. Atmos. Oceanic Technol.* **27**, 1583 - 1598.
- Hubbert J.C., S. Ellis, M. Dixon and G. Meymaris, 2010: Modeling, error analysis and evaluation of dual polarization variables obtained from simultaneous horizontal and vertical polarization transmit radar. Part II: Experimental data illustration. *J. Atmos. Oceanic Technol.* **27** 1599 - 1607.
- Hubbert, J.C., M. Dixon, S.M. Ellis, and G. Meymaris, 2009: Weather Radar Ground Clutter. Part I: Identification, Modeling, and Simulation. *J. Atmos. Oceanic Technol.*, **26**, 1165–1180.
- Hubbert, J.C., M. Dixon, and S.M. Ellis, 2009: Weather Radar Ground Clutter. Part II: Real-Time Identification and Filtering. *J. Atmos. Oceanic Technol.*, **26**, 1181–1197.

- Deierling, W., W. A. Petersen, J. Latham, S. Ellis, and H. J. Christian, 2008, The relationship between lightning activity and ice fluxes in thunderstorms, *J. Geophys. Res.*, **113**, D15210, doi:10.1029/2007JD009700
- Roberts, R.D., F. Fabry, P.C. Kennedy, E. Nelson, J.W. Wilson, N. Rehak, J. Fritz, V. Chandrasekar, J. Braun, J. Sun, S. Ellis, S. Reising, T. Crum, L. Mooney, R. Palmer, T. Weckwerth, and S. Padmanabhan, 2008: REFRACTT 2006. *Bull. Amer. Meteor. Soc.*, **89**, 1535–1548.
- Deierling, W., J. Latham, W. Petersen, S. Ellis and H. Christian, 2005: On the relationship of thunderstorm ice hydrometeor characteristics and total lightning measurements. *Atmos. Res.*, **76**, 114-126.
- Vivekanandan, J., G. Zhang, S. M. Ellis, D. Rajopadhyaya, and S. K. Avery, 2003: Radar reflectivity calibration using differential propagation phase measurement, *Radio Sci.*, **38**(3), 8049, 2003.
- Barthezy, E, S. Goeke, J Vivekanandan and S. M. Ellis 2001: Detection of snow and ice crystals using polarization radar measurements: comparison between ground-based in situ and S-Pol observations. *Atmos. Res.*, **59 – 60** (2001) 137 – 162.
- Keeler, R. J. and S. M. Ellis, 2000: Observational error covariance matrices for radar data Assimilation. *Phys. Chem. Earth (B)*, Vol. **25**, 1277-1280.
- Vivekanandan, J., S.M Ellis, D. S. Zrnic, R. Oye, A. V. Ryzhkov, and J. Straka, 1999: Cloud Microphysics Retrieval Using S-Band Dual-Polarization Radar Measurements. *Bull. Amer. Meteor. Soc.*, **80**, 381-388.
- Shapiro, A., S. Ellis, and J. Shaw, 1995: “Single-Doppler velocity retrievals with Phoenix II data: Clear air and microburst wind retrievals in the planetary boundary layer.” *J. Atmo. Sci.*, **52**, 9, 1265-1287.

Book Chapter:

- Haupt S E, A Pasini, C Marzban, 2009: *Artificial Intelligence Methods in the Environmental Sciences*. Springer Science+Business Media B.B., 347-379 pp.

Conference:

- Ellis, S.M., R. M. Rauber, P. Tsai, J. M. Emmett, E. Loew, C. D. Burghart, M. J. Dixon, J. Vivekanandan, S. Rauenbuehler, J. L. Stith, and W. C. Lee, 2015: The HIAPER Cloud Radar Performance and Observations During Winter Storm Observations of a Nor'easter. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Hubbert, J. C., M. Dixon, G. Meymaris, and S. M. Ellis, 2015: Zdr calibration instability: an experimental analysis of the responsible radar components. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Vivekanandan, J., S. Ellis, B. Morley, P. Tsai, and S. Spuler, 2015: Retrieval of Cloud Microphysics from HIAPER Cloud Radar Measurements. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Tsai, P., S. M. Ellis, C. Burghart, J. M. Emmett, M. J. Dixon, E. Loew, J. Vivekanandan, and S. Rauenbuehler, 2015: Engineering Challenges of the HIAPER Cloud Radar: Real-time Active Platform Stabilization and Pressure/Temperature Control. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Rauber, R. M., S. M. Ellis, J. Vivekanandan, J. L. Stith, W. C. Lee, G. M. McFarquhar, and B. F. Jewett, 2015: Convection, turbulence, generating cells and other fine scale structures within a Nor'easter: a first look at high resolution HIAPER Cloud Radar Observations. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Ellis, S. M. and J. Vivekanandan, 2015: Dual-wavelength humidity profiles and liquid water content retrievals using S-PolKa During the DYNAMO Field Campaign. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Meymaris, G., M. Dixon, S. M. Ellis, and J. Hubbert, 2015: Clutter Mitigation Decision (CMD) Development and Evaluation using Neural Networks. 37th Conference on Radar Meteorology, 14 – 18 September 2015, Norman OK.
- Yuter S. E., N. A. Corbin, S. Rhodes, S. Berry, M. A. Miller, S. M. Ellis, and P. C. Kennedy, 2015: Radar Observations of Storms for Education: Real storm examples for the mesoscale course classroom. AMS Conference on Mesoscale Processes, 3 – 6 August 2015 Boston, MA.
- Ice, R. L., G.T. McGehee, J. C. Krause, J. N. Chrisman, A.E. Daniel, J. C. Hubbert, M. Dixon, S. Ellis and G Meymaris, 2015: Identifying and Mitigating Clutter for Polarimetric Variables. 32nd Conference on Environmental Information

- Processing Technologies, AMS Annual Meeting, January 10-14, 2015, Phoenix, AZ.
- Yuter S. E., N. A. Corbin, M. A. Miller, S. M. Ellis, and P. C. Kennedy, 2015: Radar Observations of Storms for Education: A bridge between idealized conceptual diagrams and real weather. 95th American Meteorological Society Annual Meeting, January 04 - 08, 2015, Phoenix, AZ.
- Vivekanandan, J. and S.M. Ellis, 2014: Reflectivity Calibration and Radial Wind Correction for HIAPER Cloud Radar International Conference on Mesoscale Meteorology and Tropical Cyclones, 15 September – 18 September 2014, Boulder CO
- Ellis S.M. and Hubbert J.C., 2014: Interpreting Simultaneous horizontal and vertical polarization transmit radar data collected during TiMREX, International Conference on Mesoscale Meteorology and Tropical Cyclones, 15 September – 18 September 2014, Boulder CO
- Hubbert J.C. and S.M. Ellis, 2014: Microphysical interpretation of coincident simultaneous and fast alternating horizontal and vertical polarization transmit data, 8th European Conference on Radar Meteorology, 1-5 September 2014, Garmisch-Partenkirchen, Germany
- Ellis S. M., D. Albo, T. M. Weckwerth, J. C. Hubbert, and M. J. Dixon, 2014: Development of a Real-time Data Quality Index for the S-Pol Radar, 8th European Conference on Radar Meteorology, 1-5 September 2014, Garmisch-Partenkirchen, Germany
- Serke David J., NCAR, Boulder, CO; and S. Ellis, J. Hubbert, D. Albo, C. Johnston, C. Coy, and M. Politovich, 2013: In-flight icing hazard detection with dual and single polarimetric moments from operational NEXRADs, 16-20 September 2013, Breckenridge, CO
- Ellis S. M., J. C. Hubbert, M. J. Dixon, and G. Meymaris: 2013: Evaluation of the Clutter Mitigation Decision Performance as a Function of Clutter to Signal Ratio, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Ellis S. M., D. Albo, T. M. Weckwerth, J. C. Hubbert, and M. J. Dixon, 2013: Development of a Real-time Data Quality Index for the S-Pol Radar, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Hubbert J.C., S. M. Ellis and W. Y. Chang Microphysical Interpretation of both Fast Alternating and Simultaneous Horizontal and Vertical Transmit Data, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO

- Sahoo, Swaroop, X. Bosch-Lluis, S. C. Reising, J. Vivekanandan, P. Zuidema, and S. M. Ellis, 2013: Comparison of Observations of the Spatial Distribution of Water Vapor Derived from Radar and Radiometer Measurements During the DYNAMO Field Campaign, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Sahoo, Swaroop, X. Bosch-Lluis, S. C. Reising, J. Vivekanandan, P. Zuidema, and S. M. Ellis, 2014, Retrieval of Water Vapor and Liquid Water from Ground-Based Microwave Radiometer Measurements using the Cloudy Sky Ratio 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, Pasadena CA.
- Ellis S. M., J. Vivekanandan, P. S. Tsai, E. Loew, C. Burghart, M. J. Dixon, J. M. Emmett, M. Strong, and W. Lee, 2013: Initial Evaluation of the HIAPER Cloud Radar Doppler Velocity Measurements, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Hubbert J.C., R. A. Rilling and S. M. Ellis, 2013: An evaluation of raindrop size distribution as a function of height using S-Pol polarimetric radar data from DYNAMO, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Thompson Elizabeth J., S. A. Rutledge, B. Dolan, R. A. Rilling, M. Dixon, S. M. Ellis, and W. Xu Radar Rainfall estimation during DYNAMO. 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO.
- Evan A. Kalina, K. Friedrich, S. M. Ellis, and D. W. Burgess, 2013: Comparison of Disdrometer and X-band Mobile Radar Observations in Convective Precipitation, 36th Conference on Radar Meteorology, 16-20 September 2013, Breckenridge, CO
- Ellis, S. M., NCAR, Boulder, CO; and M. Dixon, J. C. Hubbert, and G. Meymaris, 2013: Evaluation of the Clutter Mitigation Decision Performance as a Function of Clutter to Signal Ratio. AMS Annual Meeting, Austin TX, 6 – 10 Jan, 2013.
- McFarlane, Sally, Chuck Long, Zhe Feng, Jennifer Comstock, Chitra Sivaraman, Nitin Bharadwaj, Karen Johnson, Brad Orr, Michael Ritsche, Scott Collis, Courtney Schumacher, Scott Ellis, 2012: Overview of ARM observations during the ARM MJO Investigation Experiment (AMIE). AGU 2012.
- Ellis, S. M., J. Vivekanandan, P. Zuidema 2012: Towards the Verification of Dual-wavelength of Liquid Water Content Using Microwave Radiometer measurements. 7th European Radar Conference, Toulouse, France, 25th to 29th June, 2012.

- Ellis, S. M., D. Serke, J. Hubbert, D. Albo, A. Weekly, M. Politovich, A. Gaydos, D. Adriaansen, E. R. Williams, D. J. Smalley, and M. F. Donovan, 2012: Towards the Detection of Aircraft Icing Conditions Using Operational Dual-polarimetric Radar. 7th European Radar Conference, Toulouse, France, 25th to 29th June, 2012.
- Johnston, C., D. Serke, S. Ellis, A. Reehorst, J. Hubbert, D. Albo, A. Weekley, D. Adriaansen, K. Elmore and M. Politovich, 2013: Statistical Analysis of A RADAR-BASED Icing Hazard Algorithm, AMS Annual Meeting, Austin TX, 6 – 10 Jan, 2013.
- Serke, D., S. M. Ellis, A. L. Reehorst, J.C. Hubbert, D. Albo, A. Weekley, D. Adriaansen, A. Gaydos, and M. Politovich, 2012: Progress toward a volumetric in-flight icing hazard detection system for airports which incorporates operational dual-polarization S-band radar data. 7th European Radar Conference, Toulouse, France, 25th to 29th June, 2012.
- Ellis, S. M., Jothiram Vivekanandan, Tammy Weckwerth, Robert Rilling, John Hubbert, Wen Chau Lee, Robert Houze, and Chidong Zhang, 2012: An overview of the NCAR S-PolKa radar operations during DYNAMO. 30th Conference on Hurricanes and Tropical Meteorology, Ponte Vedra Beach, April 16 -20, 2012.
- Ellis, S. M., NCAR, Boulder, CO; and D. Serke, J. Hubbert, D. Albo, A. Weekley, and M. K. Politovich, 2011: In-flight icing detection using S-band dual-polarimetric weather radar data. AMS 35th Conference on Radar Meteorology, Pittsburg, PA, September 26 – 30, 2011.
- Hubbert, J.C., NCAR, Boulder, CO; and P. C. Kennedy, V. Chandrasekar, S. A. Rutledge, W. C. Lee, V. N. Bringi, J. W. Wilson, D. A. Brunkow, M. Dixon, T. Weckwerth, J. George, E. Loew, J. VanAndel, A. Phinney, B. Bowie, R. A. Rilling, and S. M. Ellis, 2011: FRONT: The Front Range Observational Network Testbed. AMS 35th Conference on Radar Meteorology, Pittsburg, PA, September 26 – 30, 2011.
- Ellis, S.M., NCAR, Boulder, CO; and J. Hubbert and M. Steiner, 2011: On the correction of attenuation with simultaneous transmit dual-polarization radars. AMS 35th Conference on Radar Meteorology, Pittsburg, PA, September 26 – 30, 2011.
- Ellis, S.M., NCAR, Boulder, CO; and J. Hubbert, M. Dixon, and G. Meymaris, 2011: Impacts and mitigation of ground clutter on S-band dual-polarimetric radar data. AMS 35th Conference on Radar Meteorology, Pittsburg, PA, September 26 – 30, 2011.
- Tsai, P., NCAR, Boulder, CO; and E. Loew, J. M. Emmett, C. D. Burghart, M. Dixon, J. H. VanAndel, and S. M. Ellis, 2011: NCAR SpolKa dual-wavelength polarimetric radar: design and improvement of Ka-band radar system. AMS 35th Conference on Radar Meteorology, Pittsburg, PA, September 26 – 30, 2011.

Serke D., NCAR/RAL; John Hubbert, NCAR/EOL; Andrew Reehorst, NASA Glenn Research Center; Marcia Politovich, NCAR/RAL; Patrick Kennedy, Colorado State University; Mike Dixon, Scott Ellis, NCAR/EOL; Chris Johnston, David Albo, Scott Landolt, NCAR/RAL, 2011: In-flight Icing Hazard Verification with NASA's Icing Remote Sensing System for Development of the NEXRAD Icing Hazard Level Algorithm [SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing](#)

J.C. Hubbert, S. Ellis, G. Meymaris and M. Dixon, 2011: Antenna polarization errors and biases in polarimetric variables for simultaneous horizontal and vertical transmit radar: ERAD2010 - THE SIXTH EUROPEAN CONFERENCE ON RADAR IN METEOROLOGY AND HYDROLOGY, 8 July 2010

John C. Hubert, NCAR, Boulder, CO; and M. Dixon, G. Meymaris, and S. Ellis, 2011. Modeling and experimental observations of weather radar ground clutter. 91st American Meteorological Society Annual Meeting, 24 – 27 January, 2011.

Ellis S. M., G. Meymaris, J. Hubbert, and M. Dixon, 2011: Impacts and mitigation of ground clutter on dual-polarimetric radar data 91st American Meteorological Society Annual Meeting, 24 – 27 January, 2011.

Ellis S. M., J. Hubbert, M. Dixon, and G. Meymaris, 2009: Ground clutter mitigation for S-band dual-polarimetric radars. AMS 34th Conference on Radar Meteorology, Williamsburg, VA, October 5 – 9, 2009.

Ellis S. M. and J. Vivekanandan, 2009: Cloud liquid water content and particle size retrievals using dual-wavelength radar measurements. AMS 34th Conference on Radar Meteorology, Williamsburg, VA, October 5 – 9, 2009.

Hubbert J.C., S. Ellis, G. Meymaris and M. Dixon, 2009: Cross-coupling, antenna errors and simultaneous horizontal and vertical polarization transmit data. AMS 34th Conference on Radar Meteorology, Williamsburg, VA, October 5 – 9, 2009.

Dixon M., J. Hubbert, G. Meymaris, and S. Ellis, 2009: Clutter mitigation in diverse environments. AMS 34th Conference on Radar Meteorology, Williamsburg, VA, October 5 – 9, 2009.

Hubbert J. C., X. S. Shen, T. C. Wang, and S. M. Ellis, 2009: X-band simultaneous horizontal and vertical transmit data and cross-coupling signatures. AMS 34th Conference on Radar Meteorology, Williamsburg, VA, October 5 – 9, 2009.

Hubbert J. C., S.M. Ellis, M. Dixon and G. Meymaris, 2009: Real time identification and filtering of ground clutter. AMS Annual Meeting, IIPS, Phoenix AZ, 11–15 January.

- Hubbert, J.C., M. Dixon, S. Ellis and G. Meymaris; 2009: Simultaneous horizontal and vertical transmit radar data and polarization errors, AMS Annual Meeting IIPS, Phoenix, AZ, 11–15 January.
- John C. Hubbert, Mike Dixon and Scott Ellis, 2008: Real time mitigation of ground clutter, ERAD 2008, Helsinki, Finland, 30 June - 4 July.
- Ellis, S.M., J. Vivekanandan, 2008. Liquid Water Content and Particle Size Retrievals Using Dual-frequency Radar Measurements. International Conference on Cloud Physics, Cancun Mexico, July 7-11.
- Deierling, W., W. A. Petersen and S. Ellis, 2008. “The relationship between total lightning, ice mass, liquid water mass and convective rainfall.”, AMS Annual Meeting IIPS, New Orleans, LA, 21–25 January.
- Ellis, S. M., J. C. Hubbert and M. Dixon, 2008: “Real time mitigation of ground clutter”, AMS Annual Meeting IIPS, New Orleans, LA, 21–25 January.
- Deierling, W., W.A. Petersen and S.M. Ellis: Convective rainfall amounts, ice water content and total lightning for individual storms from different climate regions. AMS 33rd Conference on Radar Meteorology, Cairns, Australia, 6-10 August 2007.
- Dixon M., J. C. Hubbert, S. Ellis, C. Kessinger, and G. Meymaris: Intelligent mitigation of normal propagation and anomalous propagation clutter. AMS 33rd Conference on Radar Meteorology, Cairns, Australia, 6-10 August 2007.
- Ellis, S.M.; J. Vivekanandan: WATER VAPOR AND LIQUID WATER ESTIMATES USING SIMULTANEOUS S AND KA BAND RADAR MEASUREMENTS, 4th ERAD Conf., Barcelona, Spain, 18-22 Sept. 2006.
- Hubbert J. C. ; and F. Pratte, R. A. Rilling, and S. M. Ellis Calibration of Zdr for NEXRAD, 23rd Conference on IIPS, AMS annual meeting, San Antonio TX 15 – 18 January 2007.
- Hubbert, J.C.; Pratte, F.; Ellis, S; Dixon, M. DIFFERENTIAL POWER CALIBRATION FOR WEATHER RADAR, 4th ERAD Conf., Barcelona, Spain, 18-22 Sept. 2006.
- Göke, S., D. M. Plummer, S. E. Ellis and J. Vivekanandan: Analysis of microphysical data in an orographic environment to evaluate a polarization radar-based hydrometeor classification scheme, 12th AMS Mountain Met. Conf., Santa Fe, NM, 28 Sept. - 1 Oct. 2006.
- Göke, S., D. M. Plummer, S. E. Ellis and J. Vivekanandan: Analysis of microphysical data in an orographic environment to evaluate a polarization radar-based

- hydrometeor classification scheme, 4th ERAD Conf., Barcelona, Spain, 18-22 Sept. 2006.
- Plummer, D., S. Göke, S. Ellis, and J. Vivekanandan. Evaluation of a polarization radar-based hydrometeor classification algorithm through the analysis of microphysical data in an orographic environment, 29th International Conference on Alpine Meteorology, Chambéry, France, on June 4-8, 2007.
- Ellis, S. M., C. Kessinger, J. Van Andel, M. Dixon, and J. Hubbert, 2006: "Enhancements in Clutter/Precipitation Discrimination for the WSR-88D", 22nd IIPS Conference, Atlanta GA.
- Hubbert, J. C., G. Meymaris, S. Ellis, and M. Dixon, 2006: "Application and issues of SZ phase coding for NEXRAD", 22nd IIPS Conference, Atlanta GA.
- Deierling, W., W. A. Petersen, J. Latham, S. M. Ellis, H. Christian, and J. T. Walters: "Total lightning frequency in relation to downward and upward ice mass fluxes for different thunderstorm types and climate regions", Preprints, AMS 85th Annual Meeting, Atlanta, USA, 28 Jan. -2 Feb. 2006.
- Ellis, S. M., J. Vivekanandan, K. Goodman, Jr., and C. Kessinger, 2005: "Water vapor and liquid water estimates using simultaneous S and Ka band radar measurements", 32nd Conf. Rad. Meteo., Albuquerque, NM.
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