

CG/AR Publications

[Note: To date, CG/AR research has resulted in 281 publications including 75 papers in refereed journals (under Cooperative Agreements DAAL01-98-2-078, DAAD19-01-2-0018, DAAD19-02-2-0005, and W911NF-06-2-0015).]

Adams, C., and K. Eis, 2000: Getting critical weather and flood information to end-users: A comparison of the Integrated Weather Effects Display Aid (IWEDA) and the Local Data Acquisition and Dissemination (LDAD) systems. Preprints, Sixteenth International Conference on Interactive Information and Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology, January 9-14, Long Beach, CA, p. 183-186 (AMS).

Adams, C., D. Sauter, D. Miller, M. Kelsch, C. Subramaniam, and M. Torres, 2000: Comparison of military and civilian weather information decision support systems. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2000 (also on web site), April 24-27, Fort Collins, CO (ARL).

Azimi-Sadjadi, M.R., J. Wang, K. Saitwal, and D. Reinke, 2001: A multi-channel temporally adaptable system for continuous cloud classification from satellite imagery. Proceedings, International Joint Conference on Neural Networks (IJCNN), July 14-19, Washington, DC.

Azimi-Sadjadi, M.R., W. Gao, T.H. Vonder Haar, and D. Reinke, 2001: Temporal updating scheme for probabilistic neural network with application to satellite cloud classification – further results. *IEEE Trans. Neural Networks*, 12(5), 1196-1203 (Sept).

Banta, R.M., R.K. Newsom, and J.K. Lundquist, 2000: Formation and evolution of the nocturnal LLJ and surface-layer vertical mixing in the SBL during CASES-99. Fourteenth Symposium on Boundary Layers and Turbulence, August 7-11, Aspen, CO, (AMS).

Banta, R.M., L.S. Darby, R.K. Newsom, R.M. Hardesty, and J.N. Howell, 2000: Atmospheric gravity waves, low-level jets, and mountain gap flows measured by ETL's Doppler lidars during October 1999. Twentieth International Laser Radar Conference, July 10-14, Vichy, France.

Banta, R.M., R. Newsom, J.K. Lundquist, Y.L. Pichugina, R.L. Coulter, and L.D. Mahrt, 2001: Nocturnal low-level jet characteristics observed during CASES-99. Proceedings CD, (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).

- Banta, R.M., R.K. Newsom, Y.L. Pichugina, J.K. Lundquist, 2002: Nocturnal LLJ evolution and its relationship to turbulence and fluxes. Preprints, Fifteenth Symposium on Boundary Layers and Turbulence, July 15-19, Wageningen, The Netherlands, (AMS).
- Banta, R.M., R. Newsom, J.K. Lundquist, Y.L. Pichugina, R.L. Coulter, and L.D. Mahrt, 2002: Nocturnal low-level jet characteristics over Kansas during CASES-99. *Boundary-Layer Meteor.*, 105, 221-252.
- Barlow, S.J. and T.H. Vonder Haar, 2001: Exploratory study for detecting low clouds (base <10,000 feet) over the southwestern United States using tropical rainfall measuring mission microwave (TRMM) imager 85.5 GHz data and coincident 10.8 micron infrared data. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 103 pp. [ISSN 07375352-51].
- Belcher, L.R., L.D. Carey, J.M. Davis, J.A. Kankiewicz, and T.H. Vonder Haar, 2003: MM-wave radar structure and microphysical characteristics of mixed phase altocumulus clouds. Preprints, 31st Radar Conference, American Meteorological Society, Seattle, WA, August 6-12.
- Benedetti, A., G.L. Stephens, and T. Vukicevic, 2003: Variational assimilation of Radar reflectivities in a cirrus model. Part I: model description and adjoint sensitivity studies. *Quarterly Jou. Royal Meteor. Soc.*, 129, 277-300.
- Benedetti, A., G.L. Stephens, and T. Vukicevic, 2003: Variational assimilation of Radar reflectivities in a cirrus model. Part II: optimal initialization and model bias estimation. *Quarterly Jou. Royal Meteor. Soc.*, 129, 301-319.
- Blumen, W., R.M. Banta, S. Burns, D.C. Fritts, R.K. Newsom, G.S. Poulos, and J. Sun, 2001: Turbulence statistics of a Kelvin-Helmholtz billow event observed in the nighttime boundary layer during the CASES-99 field program. *Dynam. Atmos. Oceans*, 34, 189-204.
- Bucholtz, A., J.H. Bowles, K. Carrico, W. Chen, D. Collins, C.O. Davis, J. Eilers, P. Flatau, H. Jonsson, D. Korwan, S.M. Kreidenweis, J.M. Livingston, M. Montes, B. Provencal, E. Reid, J.S. Reid, J. Redemann, B. Schmid, W. Snyder, A. Strawa, A.L. Walker, D.L. Westphal and M. Witek, 2003: Properties and effects of Asian aerosols over the central California coast during the ADAM-2003 (Asian Dust Above Monterey-2003) field study. Proceedings, 22nd Annual American Association for Aerosol Research Conference, October 20-24, Anaheim, California.
- Campbell, G.G., 2000: Polar orbiter wind and height estimation. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Campbell, G.G., 2001: Automated cloud stereo heights and motions from satellite imagery. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).

- Campbell, G.G., F. Dell'Acqua, and P. Gamba, 1999: Modal matching driven association between meteorological objects in stereo satellite images. IEEE meeting, July, Hamburg, Germany.
- Campbell, G.G., and E.R. Dufour, 2000: Lagrangian views of cloud systems. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Campbell, G.G., and F.M. Breon, 2000: Polar orbiter: Stereo heights and cloud motions. Fifth Winds Workshop, February 28-March 2, Melbourne, Australia (World Meteorological Agency).
- Campbell, G.G., and K. Holmlund, 2000: Geometric cloud heights from Meteosat and AVHRR. Fifth Winds Workshop, February 28-March 2, Melbourne, Australia (World Meteorological Agency).
- Campbell, G.G., T.H. Vonder Haar, K. Eis, 2001: Cloud stereo heights and motions from satellites imagery. Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (AMS).
- Campbell, G.G., T.H. Vonder Haar, J. Forsythe, J.A. Kankiewicz, R. Engelen, and S. Woo, 2001: Radiative impact of clouds and water vapor variations above 300MB from long-term NVAP and ISCCP observations. Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (AMS).
- Campbell, G.G. and G. Dengel, 2002: Verification of automatic winds and heights with asynchronous stereo analysis. Preprints, Sixth Winds Workshop, May 6-10, Madison, WI (WMO).
- Carey, L.D., T.H. Vonder Haar, J.A. Kankiewicz, J.M. Davis, R.P. Fleishauer, and V.E. Larson, 2001: An overview of the next complex layered cloud experiment (CLEX-9). Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Carey, L.D., L.R. Belcher, J.A. Kankiewicz, and T.H. Vonder Haar, 2005: MM-wave radar structure and microphysical characteristics of a mixed phase altocumulus cloud on 2 November, 2001. Preprint CD-ROM, 32nd Radar Conference, American Meteorological Society, October 24-29, Albuquerque, NM.
- Carey, L.D., L.R. Belcher, J.A. Kankiewicz, and T.H. Vonder Haar, 2005: MM-wave radar structure and microphysical characteristics of a mixed phase altocumulus cloud on 2 November, 2001. Preprint CD-ROM, American Geophysical Union Annual Fall Meeting, December 5-9, San Francisco, CA.
- Carey, L.D., J. Niu, P. Yang, J.A. Kankiewicz, T.H. Vonder Haar, and V.E. Larson, 2006: A typical vertical profile of liquid and ice water content in mid-latitude, mid-level altocumulus. *Geophys. Res. Lett.*, (submitted).

- Castro, C.L., R.A. Pielke Sr., and G. Leoncini, 2005: Dynamical downscaling: Assessment of value retained and added using the Regional Atmospheric Modeling System (RAMS). *J. Geophys. Res. - Atmospheres*, 110, No. D5, D05108, doi:10.1029/2004JD004721.
- Chai, T., C.L. Lin, and R.K. Newsom, 2004: Retrieval of microscale flow structures from high resolution Doppler lidar using an adjoint model. *J. Atmos. Sci.*, 61, 1500-1520.
- Chibe, R.J., 2003: The numerical simulation of fog with the RAMS@CSU cloud-resolving mesoscale forecast model. Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, Paper No. 741.
- Chibe, R.J., W.R. Cotton, 2003: Numerical forecasting of fog with the RAMS@CSU cloud-resolving mesoscale forecast model (poster). On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Combs, C.L. and T.H. Vonder Haar, 2003: Smart climatology: wind-stratified cloud products from combined satellite cloud observations and model output wind fields (oral). On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Combs, C.L., D. Rapp, A.S. Jones, and G. Mason, 2007: Comparison of AGRMET model results with *in situ* soil moisture data. Pre-print CD-ROM, 21st Conference on Hydrology, January 14-18, San Antonio, TX (AMS).
- Corbin, K.C. 2001: Comparison of aerosol properties derived from sun photometer data and ground-based chemical measurements. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, 102 pp.
- Corbin, K., S. Kreidenweis, and T. Vonder Haar, 2000: Comparison of aerosol properties derived from sun photometer data and ground-based chemical measurements. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Corbin, K.C., S.M. Kreidenweis, and T.H. Vonder Haar, 2002: Comparison of aerosol properties derived from sun photometer data and ground-based chemical measurements. *Geophys. Res. Letters*, 29(10), 10.1029/2001GL014105.
- Cotton, W.R., E. Zarovy, G. Carrio, S. Saleeby, H. Jiang, D. Stokowski, and S. van den Heever, 2004: Mesoscale numerical prediction of aerosols and dust. Extended Abstract, AHPCRC Workshop, May 24-26, Jackson, MS.
- Cox, S.K., and J.M. Davis, 1999: The next generation multiple field of view radiometer. Preprints, Tenth Conference on Atmospheric Radiation, June 28-July 2, Madison, WI, p. 251-254 (AMS).

- Dalu, G.A., M. Baldi, R.A. Pielke Sr., and G. Leoncini, 2003: Mesoscale non-hydrostatic and hydrostatic pressure gradient forces: Theory and parameterization. *J. Atmos. Sci.*, 60(18), 2249-2266.
- Derickson, R.C., and R.A. Pielke, Sr., 2000: A preliminary study of the Burgers equation with symbolic computation. *J. Comp. Physics*, 162, 219-244.
- Donofrio, K.M., 2007: A 1DVAR optimal estimation retrieval of water vapor profiles over the global oceans using spectral microwave radiances. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, 165 pp.
- Drobinski, P., R.K. Newsom, R.M. Banta, P. Carlotti, R.C. Foster, P. Naveau and J.L.Redelsperger, 2002: Preprints, Turbulence in a shear-driven nocturnal surface layer as observed by Doppler lidar, rawinsondes and sonic anemometer during the CASES'99" experiment. Preprints, Twenty-First International Laser Radar Conference, July 8-12 Montreal, Quebec.
- Drobinski, P., R.K. Newsom, P. Naveau, R.M. Banta, P. Carlotti, and R.C. Foster, 2002: Turbulence in a shear-driven surface layer during the CASES'99 experiment. Preprints, Fifteenth Symposium on Boundary Layers and Turbulence, July 15-19, Wageningen, Netherlands (AMS).
- Drobinski, P., P. Carlotti, R. Newsom, R. Foster, R. Banta, and J. Redelsperger, 2004: The structure of the near-neutral atmospheric surface layer. *J. Atmos. Sci.*, 61, 699-714.
- Eis, K.E., 2003: Improving satellite information. *Observer*, July/Aug, p. 17.
- Eis, K.E., and T.H. Vonder Haar, 1998: DoD's Center for Geosciences and Atmospheric Research. Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 1998 Conference, December 1-3, Hanscom AFB, MA, p. 3-9 (AFRL).
- Eis, K.E., and T.H. Vonder Haar, 2000: Status of the Colorado State University Center for Geosciences/Atmospheric Research. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Falcone, A.K., 2005: Canonical coordinate feature extraction for cloud classification and analysis. Masters thesis, Department of Electrical and Computer Engineering, Colorado State University, Fort Collins, Colorado, 168 pp.
- Falcone, A.K., M.R. Azimi-Sadjadi, A. Pezeshki, J.A. Kankiewicz, and D.L. Reinke, 2004: Coherent-based feature extraction for cloud analysis using satellite imagery data. Proceedings, Asilomar Conference on Signals, Systems, and Computers, November 7-10, Pacific Grove, CA, p. 1695-1699.

- Falcone, A.K., M.R. Azimi-Sadjadi, 2005: Multi-Satellite cloud product generation over land and ocean using canonical coordinate features. 2005 MTS/IEEE Oceans Conference, September 18-23, Washington, DC.
- Falcone, A.K., M.R. Azimi, and J.A. Kankiewicz, 2007: Dual-satellite cloud product generation using temporally updated canonical coordinate features. *IEEE Trans. Geosci. Remote Sens.*, 45 (4), 1046-1060 (April).
- Falk, M.J. and V.E. Larson, 2006: What causes partial cloudiness to form in multilayered midlevel clouds? A simulated case study. *J. Geophys. Res.* (accepted).
- Falk, M.J. and V.E. Larson, 2006: A simulation of partial cloudiness in multilayered altocumuli. Preprint CD-ROM, Twelfth Conference on Cloud Physics, July 10-14, Madison, WI (AMS).
- Fleishauer, R.P., 2002: Observed microphysical structure of midlevel, mixed-phase clouds. Ph.D. dissertation, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 176 pp.
- Fleishauer, R.P., V.E. Larson, J.A. Kankiewicz, D.L. Reinke, and T.H. Vonder Haar, 2000: Complex Layered Cloud Experiment (CLEX-5): Preliminary phenomenology of four case studies. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Fleishauer, R.P., V.E. Larson, and T.H. Vonder Haar, 2001: Observed microphysical structure of mid-level, mixed-phase clouds. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Fleishauer, R.P., V.E. Larson, and T.H. Vonder Haar, 2002: Observed microphysical structure of midlevel, mixed-phase clouds. *J. Atmos. Sci.*, 59, 1779-1804.
- Fletcher, S.J. and M. Zupanski, 2006: Implications and impact of transforming lognormal variables into normal variables in VAR. 7th International Workshop on Adjoint Application in Dynamic Meteorology, October 8-13, Innsbruck, Austria.
- Fletcher, S.J. and M. Zupanski, 2006: Lognormal data assimilation: theory and applications. Preprint CD-ROM, AGU Fall Meeting, December 11-15, San Francisco, CA.
- Fletcher, S.J. and M. Zupanski, 2007: An alternative to bias correction in retrievals and direct radiances assimilation. Pre-print CD-ROM, 11th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS), January 13-19, San Antonio, TX (AMS).

- Forsythe, J.M., A.S. Jones, and T.H. Vonder Haar, 2004: Development of a global microwave land surface emissivity retrieval. Proceedings, SPIE Annual Meeting 2004, August 2, Denver, CO.
- Forsythe, J.M., A.S. Jones, and T.H. Vonder Haar, 2004: Water vapor profile retrievals from satellite microwave sounding instruments. Preprint CD-ROM, Thirteenth Conference on Satellite Meteorology and Oceanography, September 20-24, Norfolk, VA (AMS).
- Forsythe, J.M., M.J. Nielsen, A.S. Jones, R.W. Kessler, K. Donofrio, and T.H. Vonder Haar, 2005: Water vapor and temperature profile retrievals from satellite microwave sounding instruments over land and ocean. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Forsythe, J.M., K.M. Donofrio, R.W. Kessler, A.S. Jones, and T.H. Vonder Haar, 2006: Atmospheric profiles over land and ocean from AMSU. Preprint CD-ROM, Fourteenth Conference on Satellite Meteorology and Oceanography, January 29-February 2, Atlanta, GA (AMS).
- Forsythe, J.M., S.Q. Kidder, K.M. Donofrio, A.S. Jones, and T.H. Vonder Haar, 2007: Extending satellite microwave humidity profiles from ocean to land. Pre-print CD-ROM, 11th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, January 14-18, San Antonio, TX (AMS).
- Fowler, L.D. and T.H. Vonder Haar, 2006: Implementation of the RAMS cloud microphysics parameterization in WRF-ARW. On web site, Seventh Annual WRF Users' Workshop, June 19-22, Boulder, CO.
- Fritts, D.C., C. Nappo, D.M. Riggins, B.B. Balsley, W.E. Eichenger, R.K. Newsom, 2003: Analysis of ducted motion in the stable nocturnal boundary layer during CASES-99." *J. Atmos. Sci.*, 60, 2450-2474.
- Ghemires, M., T. Vukicevic, R. Hertenstein, and T. Greenwald, 2001: Adjoint strategies for radiance data assimilation using regional atmospheric system. Preprints, Fifth Symposium on Integrated Observing Systems, January 14-19, Albuquerque, NM (AMS).
- Golaz, J.-C., V.E. Larson, J.A. Hansen, D.P. Schanen, B.M. Griffin, 2006: Elucidating model inadequacies in a cloud parameterization by use of an ensemble-based calibration framework. *Mon. Wea. Rev.*, (in review).
- Greenwald, T.J., 2000: Observing the diurnal characteristics of marine stratocumulus drizzle using the TRMM microwave imager. Preprints, Tenth Conference on Satellite Meteorology and Oceanography, January 9-14, Long Beach, CA, p. 390 (AMS).

- Greenwald, T.J., 2000: Forward radiative transfer modeling in 4D data assimilation of GOES imager data. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Greenwald, T.J., 2002: Radiative transfer modeling for 4DDA system. Preprints, Third Symposium on Observations, Data Assimilation, and Probabilistic Prediction, January 13-17, Orlando, FL (AMS).
- Greenwald, T.J., and A.S. Jones, 1999: Evaluation of seawater permittivity models at 150 GHz using satellite observations. *IEEE Trans. Geosci. Remote Sensing*, 37, 2159-2164.
- Greenwald, T.J., and C.J. Drummond, 1999: Computing the atmospheric absorption for the DMSP operational linescan system infrared channel. *J. Atmos. and Oceanic Technol.*, 16, 1958-1966.
- Greenwald, T.J., and S.A. Christopher, 1999: Daytime variation of marine stratocumulus properties as observed from geostationary satellite. *Geophys. Res. Letters*, 26(12), 1723-1726.
- Greenwald, T.J., and S.A. Christopher, 1999: Investigation of drizzling marine stratocumulus using the GOES-9 imager and C-band radar. Preprints, Tenth Conference on Atmospheric Radiation, June 28-July 2, Madison, WI, p. 58-59 (AMS).
- Greenwald, T.J., S.A. Christopher, J. Chou, and J.C. Liljegren, 1999: Intercomparison of cloud liquid water path derived from the GOES-9 imager and ground based microwave radiometers for continental stratocumulus. *Journal Geophys. Res.*, 104(D8), 9251-9260.
- Greenwald, T.J., and S.A. Christopher, 2000: The GOES I-M imagers: New tools for studying the microphysical properties of boundary layer stratiform clouds. *Bull. Amer. Meteor. Soc.*, 18(11), 2607-2619.
- Greenwald, T.J., and T. Vukicevic, 2001: Assessment of the adjoint of a radiative transfer model for assimilation of cloudy visible radiances. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Greenwald, T.J., T.H. Vonder Haar, 2001: What are the benefits of combining visible, infrared and microwave satellite data in retrieving cloud physical properties? Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (AMS).
- Greenwald, T.J., and T. Vukicevic, 2002: Atmospheric radiative transfer adjoint models for the regional atmospheric modeling and data assimilation system (RAMDAS). Preprints, Third Symposium on Observations, Data Assimilation, and Probabilistic Prediction, January 13-17, Orlando, FL (AMS).

- Greenwald, T.J., R. Hertenstein, and T. Vukicevic, 2002: An all-weather observational operator for radiance data assimilation with mesoscale forecast models. *Mon. Wea. Rev.*, 130, 1882-1897.
- Greenwald, T.J., and S.A. Christopher, 2002: Effect of cold clouds on satellite measurements near 183 GHz. *J. Geo. Res.* 107 (D13), 10.1029/2000JD000258.
- Greenwald, T.J., and S.A. Christopher, 2003: Methods for evaluating microwave-derived satellite liquid water products. Preprints, Twelfth Satellite Conference on Satellite Meteorology, February 9-13, Long Beach, CA (AMS).
- Greenwald, T.J., T. Vukicevic, and L.D. Grasso, and T.H. Vonder Haar, 2004: Adjoint sensitivity analysis of an observational operator for cloudy visible and infrared radiance assimilation. *Quarterly Jou. Royal Meteor. Soc.*, January, B, 685-705.
- Hall, T.J., and T.H. Vonder Haar, 1999: The diurnal cycle of West Pacific deep convection and its relation to the spatial and temporal variation of tropical MCSs. *J. Atmos. Sci.*, 56(19), 3401-3415.
- Herteinstein, R.F., T. Vukicevic, and T.J. Greenwald, 2000: Modeling support for data assimilation. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference, (also on web site), April 24-27, Fort Collins, CO (ARL).
- Hess, P.G., T. Vukicevic, 2003: Intercontinental transport, chemical transformations, and baroclinic systems. *J. Geophys. Res.*, 108(D12), 4354.
- Huffman III, A.C., T.H. Vonder Haar, and G.L. Stephens, 1998: Physical characterization of clouds and precipitation using 94 GHz and 13.8 GHz radar. Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 1998 Conference, December 1-3, Hanscom AFB, MA, p. 117-121 (AFRL).
- Johnson, K., 2006: A comparison of the Navy Aerosol Analysis and Prediction System to in-situ aerosol measurements in the continental U.S.: transport vs. local production of soil dust aerosol. Masters Thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, CO.
- Johnson, K., S.M. Kreidenweis, M. Witek, D.L. Westphal, P. Flatau, 2006: A comparison of the Navy Aerosol Analysis and Prediction System (NAAPS) to in-situ aerosol measurements in the continental U.S.: transport vs. local production of soil dust aerosol. Seventh American Association for Aerosol Research International Aerosol Conference, September 10-15, St. Paul, MN.

- Jones, A.S., S. Barlow, and T.H. Vonder Haar, 1998: Advanced remote sensing concepts in soil moisture analysis. Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 1998 Conference, December 1-3, Hanscom AFB, MA, 440-446 (AFRL).
- Jones, A.S., and K.E. Eis, 2000: Why the DoD needs to actively pursue remotely-sensed surface temperature, surface fluxes, soil moisture, and precipitation products over land. A CIRA white paper report, Colorado State University, Fort Collins, CO, 24 April, 10 pp.
- Jones, A.S., and T.H. Vonder Haar, 2000: The use of satellite derived surface heating rates to retrieve soil moisture in cloudy conditions. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference, (also on web site), April 24-27, Fort Collins, CO (ARL).
- Jones, A.S., and T.H. Vonder Haar, 2001: Overview of an HDF-EOS-Based parallel data-computing environment for multisensor satellite data merger and scientific analysis. Preprints, Seventeenth Conference on Interactive Information and Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology, January 14-19, Albuquerque, NM (AMS).
- Jones, A.S., and T.H. Vonder Haar, 2001: A parallel data-computing environment for multi-sensor satellite data merger and scientific analysis. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Jones, A.S., and T.H. Vonder Haar, 2002: A dynamic parallel data-computing environment for cross-sensor satellite data merger and scientific analysis. *J. Atmos. and Oceanic Technol.*, 19(9), 1307-1317.
- Jones, A.S., S.Q. Kidder, K.E. Eis, and T.H. Vonder Haar, 2002: The use of an HDF-EOS-based parallel data-computing environment for cross-sensor satellite data merger and technology transition. Preprints, Eighteenth International Conference on IIPS for Meteorology, Oceanography, and Hydrology (Joint with the Sixth Symposium on Integrated Observing Systems), January 13-17, Orlando, FL (AMS).
- Jones, A.S., P.J. Stephens, and T.H. Vonder Haar, 2003: An improved Backus-Gilbert spatial filter for satellite data processing. Preprints, Twelfth Conference on Satellite Meteorology and Oceanography, February 10-13, Long Beach, CA (AMS).
- Jones, A.S., T. Vukicevic, and T.H. Vonder Haar, 2003: Variational data assimilation of soil moisture using 6 and 10 GHz passive microwave data. Preprints, Seventh Symposium on Integrated Observing Systems (IOS): The Water Cycle, February 10-13, Long Beach, CA (AMS).

- Jones, A.S., T. Vukicevic, G.L. Stephens and T.H. Vonder Haar, 2003: Low frequency passive microwave satellite data assimilation research for retrieving deep (10-100 cm) soil moisture information. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Jones, A.S., J.M. Forsythe, S.Q. Kidder, and T.H. Vonder Haar, 2003: Extension of a 1DVAR passive microwave algorithm for near-real time atmospheric profiles and emissivity over land. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Jones, A.S., T. Vukicevic, and T.H. Vonder Haar, 2004: A microwave satellite observational operator for variational data assimilation of soil moisture. *J. Hydrometeorology*, 5, 213-229.
- Jones, A.S., J.M. Forsythe, and T.H. Vonder Haar, 2004: Retrieval of global microwave surface emissivity over land. Preprint CD-ROM, Thirteenth Conference on Satellite Meteorology and Oceanography, September 20-24, Norfolk, VA (AMS).
- Jones, A.S., J.M. Forsythe, C.L. Combs and T.H. Vonder Haar, 2005: Characterization of global microwave surface emissivity over land. Preprint CD-ROM, Ninth Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (9IOASAOLS). January 9-13, San Diego, CA (AMS).
- Jones, A.S., G. McWilliams, M. Mungiole, G. Mason, C.C. Combs, D. Rapp, P.J. Stephens, P.C. Shott, T. Vukicevic, B. McKeown, and T.H. Vonder Haar, 2005: Applications of WindSat for soil moisture satellite data assimilation and DoD impact studies. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Jones, A.S., P.C. Shott, J.M. Forsythe, C.L. Combs, R.W. Kessler, M.J. Nielsen, P.J. Stephens, and T.H. Vonder Haar, 2005: Global microwave surface emissivity error analysis. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Jones, A.S., D. Rapp, G. McWilliams, M. Mungiole, G. Mason, N.S. Chauhan, C.L. Combs, S. Longmore, B. McKeown, T. Vukicevic, and T.H. Vonder Haar, 2006: NPOESS soil moisture satellite data assimilation and RFI mitigation: Use of WindSat data and a Discrete Backus-Gilbert technique. Proceedings, International Geoscience and Remote Sensing Symposium (IGARSS) 2006, July 31-August 4, Denver, CO.
- Jones, A.S., C.L. Combs, S. Longmore, T. Lakhankar, G. Mason, G. McWilliams, M. Mungiole, D. Rapp, T.H. Vonder Haar, and T. Vukicevic, 2007: NPOESS soil moisture satellite data assimilation research using WindSat data. Pre-print CD-ROM, Third Symposium on Future National Operational Environmental Satellite Systems—Strengthening Our Understanding of Weather and Climate, January 16-17, San Antonio, TX (AMS).

- Jones, A.S., C.L. Combs, T. Lakhankar, S. Longmore, T.H. Vonder Haar, G. McWilliams, M. Mungiole, G. Mason, 2007: NPOESS soil moisture satellite data assimilation: Progress using WindSat data. Proceedings, International Geoscience and Remote Sensing Symposium (IGARSS) 2007, July 23-27, Barcelona, Spain (submitted).
- Jones, J.C., 2003: Comparisons of satellite-derived cloud heights with radar measurements of mid-level, mixed-phase clouds. Masters Thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 66 pp.
- Jones, J.C., 2003: Cloud top heights of mid-level, mixed-phase clouds from CLEX-9. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Julien, P.Y., 2002: Watershed erosion modeling with CASC2D-SED. Preprints, National Meeting of the Korean Water Resources Assn., May 8-15, Seoul, Korea, 27-40.
- Julien, P.Y., and R. Rojas, 2002: Computer modeling of upland erosion. In Advances in Hydraulics and Water Engineering, J.J Guo (ed.), Proceedings, Thirteenth IAHR-APD Congress, (1) 475-483, August 6-8, Singapore (P. Julien, keynote speaker).
- Julien, P.Y., and R. Rojas, 2002: Upland erosion modeling with CASC2D-SED. *J. Sed. Res.*, 17(4), 265-274.
- Kang, D.H., 2005: Distributed snowmelt modeling with GIS and CASC2D at California Gulch, Colorado. Masters thesis, Department of Civil Engineering, Colorado State University, Fort Collins, Colorado, 195 pp.
- Kankiewicz, J.A., 2000: Combining satellite and cloud profiling radar cloud climatologies over the Oklahoma ARM CART site. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference, April 24-27, Fort Collins, CO (ARL).
- Kankiewicz, J.A., 2000: In-situ and satellite-based observations of mixed phase non-precipitating clouds and their environments. Proceedings, Thirteenth International Conference on Clouds and Precipitation (ICCP), August 14-18, Reno, NV, 607-700 (IAMAS).
- Kankiewicz, J.A., L.D. Carey, and T.H. Vonder Haar, 2001: An ISCCP-observed diurnal cycle in mid-level cloud cover. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Kankiewicz, J.A., R.P. Fleishauer, V.E. Larson, L.D. Carey, and T.H. Vonder Haar, 2001: A "BUGSRAD" view of CLEX-5 & 7 observed mid-level, mixed-phase clouds. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).

- Kankiewicz, J.A., L.D. Carey, J.M. Davis, J.M. Forsythe, D.L. Reinke, and T.H. Vonder Haar, 2002: Morphology of two mixed-phase clouds. Preprints, Eleventh Conference on Cloud Physics, June 3-7, Ogden, UT (AMS).
- Kankiewicz, J.A., J.M. Forsythe, D.L. Reinke, K.E. Eis, T.H. Vonder Haar, 2003: Comparison between the new CDFS II WWMCA product and the CHANCES-RP and MODIS cloud masks. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Kankiewicz, J.A., T.H. Vonder Haar, and L. Carey, 2005: An overview of the next cloud layered experiment (CLEX-10). On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Kankiewicz, J.A., D.G. Reinke, D.L. Reinke, and T.H. Vonder Haar, 2006: Quick look cloud data products and their use in facilitating A-Train research. Preprint CD-ROM, AGU Fall Meeting, December 11-15, San Francisco, CA.
- Kidder, S.Q., 2001: Measurement of the albedo of cirrus clouds at 3.9 μm . Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Kidder, S.Q., 2002: A measurement of the albedo of cirrus clouds at 3.9 μm . *Geophys. Res. Lett.* 29(10), 10.1029/2001GL014041.
- Kidder, S.Q., 2002: Cirrus detection and characterization using GOES 3.9 μm albedo. Preprints, Twelfth Conference on Satellite Meteorology and Oceanography, February 9-13, Long Beach, CA (AMS).
- Kidder, S.Q., K.E. Eis, and T.H. Vonder Haar, 1998: New GOES imager system products suitable for use on field-deployable systems. Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) Conference 1998, December 1-3, Hanscom AFB, MA, p. 452-459 (AFRL).
- Kidder, S.Q., A.S. Jones, J.F.W. Purdom, and T.J. Greenwald, 1998: First local area products from the NOAA-15 Advanced Microwave Sounding Unit (AMSU). Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 1998 Conference, December 1-3, Hanscom AFB, MA, p. 447-451 (AFRL).
- Kidder, S.Q., D.W. Hillger, A.J. Mostek, and K.J. Schrab, 2000: Two simple GOES imager products for improved weather analysis and forecasting. *National Wea. Digest*, 24 (4), 25-30.
- Kidder, S.Q., J.A. Kankiewicz, and K.E. Eis, 2005: Meteosat second generation cloud algorithms for use at AFWA. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.

- Kidder, S.Q., J.A. Kankiewicz, and T.H. Vonder Haar, V.E. Larson, L.D. Carey, and D.E. Hagan, 2006: A first look at mid-level clouds using CloudSat, CALIPSO, and MODIS data. Preprint CD-ROM, AGU Fall Meeting, December 11-15, San Francisco, CA.
- Kidder, S.Q. and A.S. Jones, 2006: A blended satellite total precipitable water product for operational forecasting. *J. Atmos. and Oceanic Technol.*, 24, 74-81.
- Knapp, K., K.E. Eis, and T.H. Vonder Haar, 1998: Multi-sensor aerosol detection: Combining aerosol information from the GOES-8 and 9 imagers and NOAA/AVHRR. Proceedings, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 1998 Conference, December 1-3, Hanscom AFB, MA, p. 274-279 (AFRL).
- Knapp, K.R., T.H. Vonder Haar, and Y. Kaufman, 1999: Aerosol optical property retrievals: The effect of surface reflectance uncertainty. Preprints, Tenth Conference on Atmospheric Radiation, June 28 - July 2, Madison, WI, p. 304-307 (AMS).
- Knapp, K.R., and T.H. Vonder Haar, 2000: Aerosol retrieval over land using background composites of geostationary satellite data. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 236 pp. [ISSN: 0737-5352-48].
- Knapp, K.R., and T.H. Vonder Haar, 2000: Aerosol optical depth retrievals over land during SCAR-B using the GOES-8 imager visible channel. Preprints, Tenth Conference on Satellite Meteorology and Oceanography, January 9-14, Long Beach, CA (AMS).
- Knapp, K.R., and T.H. Vonder Haar, 2000: Aerosol remote sensing over the battlefield using geostationary visible sensors. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Knapp, K.R., and T.H. Vonder Haar, 2000: Calibration of the eighth Geostationary Observational Environmental Satellite (GOES-8) imager visible sensor. *J. Atmos. and Oceanic Tech.*, 17, 1639-1644.
- Knapp, K.R., T.H. Vonder Haar, and Y.J. Kaufman, 2002: Aerosol optical depth retrieval from GOES-8: Uncertainty study and retrieval validation over South America. *J. Geophys. Res.* 107 (D7), 10.1029/2001JD000505.
- Kotenberg, K.E., N.B. Wood, and V.E. Larson, 2006: Derivation and tests of the GCSS analytic longwave radiation formula. Preprint CD-ROM, Joint Twelfth Conference on Cloud Physics and Atmospheric Radiation, July 10-14, Madison, WI (AMS).
- Koyama, T., T. Vukicevic, A.S. Jones, M. Sengupta, and T.H. Vonder Haar, 2005: Information content of the GOES sounder IR measurements in the presence of clouds. Preprint CD-ROM, Ninth Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (9IOASAOLS), January 9-13, San Diego, CA (AMS).

- Koyama, T., T. Vukicevic, M. Sengupta, T.H. Vonder Haar, and A.S. Jones, 2006: Analysis of information content of IR sounding radiances in cloudy conditions. *Mon. Wea. Rev.*, 134, 3657-3667.
- Larson, V.E., 2004: Prognostic equations for cloud fraction and liquid water, and their relation to probability density functions. *J. Atmos. Sci.*, (61) 338-351.
- Larson, V.E., R.P. Fleishauer, J.A. Kankiewicz, D.L. Reinke, and T.H. Vonder Haar, 2000: An observational study of the microphysics of altostratus clouds. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Larson, V.E., R.P. Fleishauer, J.A. Kankiewicz, D.L. Reinke, and T.H. Vonder Haar, 2001: The death of an altocumulus cloud. *Geophys. Res. Lett.*, 28(13), 2609-2612.
- Larson, V.E., R.P. Fleishauer, J.A. Kankiewicz, D.L. Reinke, L.D. Carey, and T.H. Vonder Haar, 2001: The dynamics of altocumulus clouds. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Larson, V.E., C.M. Sears, and J-Ch. Golaz, 2002: Turbulent and radiative structure of altocumulus clouds. Preprints, Eleventh Conference on Cloud Physics, June 3-7, Ogden, UT (AMS).
- Larson, V.E., J-Ch. Golaz, H. Jiang, and W.R. Cotton, 2005: Supplying local microphysics parameterizations with information about subgrid variability: Latin hypercube sampling. *J. Atmos. Sci.*, (62) 4010-4026.
- Larson, V.E., K.E. Kotenberg, and N.B. Wood, 2006: An analytic longwave radiation formula for liquid layer clouds. *Mon. Wea. Review* (accepted).
- Larson, V.E., A.J. Smith, M.J. Falk, K.E. Kotenberg, J.C. Golaz, 2006: What determines altocumulus dissipation time? *J. Geophys. Res.*, 3, D19207, doi:10.1029/2005JD007002.
- Larson, V.E. and B.M. Griffin, 2006: Coupling microphysics parameterizations to cloud parameterizations. Preprint CD-ROM, Twelfth Conference on Cloud Physics, July 10-14, Madison, WI (AMS).
- Leoncini, G., and R.A. Pielke, Sr., 2005: Nonlinear vs. linear mesoscale dynamics. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Leoncini, G., and R.A. Pielke, Sr., 2005: Nonlinear or linear; hydrostatic or nonhydrostatic mesoscale dynamics. Preprint CD-ROM, AGU Fall Meeting, December 6-9, San Francisco, CA.

- Lietzke, C.E., C. Deser, and T.H. Vonder Haar, 2001: Evolutionary structure of the eastern Pacific double ITCZ based on satellite moisture profile retrievals. *J. Climate*, 14 (5), 743–751.
- Longmore, S., A.S. Jones, A. Carheden, and T.H. Vonder Haar, 2007: Experience and lessons learned regarding configuration and control of an advanced 4-dimensional variational satellite data assimilation system. Pre-print CD-ROM, 23rd Conference on Interactive Information Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology, January 14-18, San Antonio, TX (AMS).
- Marroquin, A., and R.A. Pielke, Sr. 2002: Influence of surface heterogeneities on boundary layer dynamics and secondary coherent wind circulations. Ninth Conference on Mesoscale Processes, July 30 – August 2, Ft. Lauderdale, FL, 230-233 (AMS).
- Masarik, M.T., 2007: Potential vorticity and energy aspects of the MJO through equatorial wave theory. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, 86 pp.
- Masarik, M.T. and W.H. Schubert, 2006: Potential vorticity aspects of the MJO. Preprints, Twenty-seventh Conference on Hurricanes and Tropical Meteorology, April 23-28, Monterey, CA (AMS).
- Matsui, T., G. Leoncini, R.A. Pielke, and U.S. Nair, 2004: A new paradigm for parameterization in atmospheric models: application to the new Fu-Liou radiation code. Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, Paper No. 747.
- McCarron, M., G. Wichern, M.R. Azimi and M. Mungiole, 2007: An operationally adaptive system for rapid acoustic transmission loss prediction. 2007 International Joint Conference on Neural Networks (IJCNN), August 12-17, Orlando, FL.
- McKague, D.S., R.J. Engelen, J.M. Forsythe, S.Q. Kidder, and T.H. Vonder Haar, 2001: An optimal-estimation algorithm for water vapor profiling using AMSU. Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (AMS).
- McKague, D.S., J.M. Forsythe, A.S. Jones, S.Q. Kidder, and T.H. Vonder Haar, 2003: A passive microwave optimal-estimation algorithm for near real-time water vapor profiling. Preprints, Twelfth Conference on Satellite Meteorology, February 9-13, Long Beach, CA (AMS).
- McNoldy, B.D., and T.H. Vonder Haar, 2000: A preliminary observational study of hurricane eyewall mesovortices. Preprints, American Geophysical Union 2000 Fall Meeting, December 15-19, San Francisco, CA.
- Miller, S.D., and J.M. Davis, 2001: Radiative properties of the CLEX-7, March 10, middle level cloud case. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).

- Nappo, C.J., R.K. Newsom, R.M. Banta, 2002: Analysis techniques for boundary-layer atmospheric gravity waves. Preprints, Fifteenth Symposium on Boundary Layers and Turbulence, July 15-19, Wageningen, Netherlands (AMS).
- Newsom R.K, 2000: Mean wind profiles derived from Doppler radar or lidar data using general scanning techniques. Preprints, Fourteenth Symposium on Boundary Layers and Turbulence, August 7-11, Aspen, CO, 373-375 (AMS).
- Newsom, R.K, W.A. Brewer, and A. Aberle, 2000: Remote detection of turbulence produced by a helicopter. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), Center for Geosciences/ Atmospheric Research, CIRA, April 24-27, Fort Collins, CO (ARL).
- Newsom R.K, R.M. Banta, J. Otten, W.L. Eberhard, and J.K. Lundquist, 2000: Doppler lidar observations of internal gravity waves, shear instability and turbulence during CASES-99. Preprints, Fourteenth Symposium on Boundary Layers and Turbulence, August 7-11, Aspen, CO, 352-365 (AMS).
- Newsom, R.K, W.A. Brewer, R.M. Hardesty, and V. Wulfmeyer, 2001: Development and meteorological applications of the NOAA/NCAR high-power 2 μ m Doppler lidar. Proceedings, Optical Remote Sensing of the Atmosphere, OSA Technical Digest (Optical Society of America, Washington, DC), 102-104.
- Newsom, R.K., R.M. Banta, 2002: Formation, evolution and decay of a shear flow instability in the stable nocturnal boundary layer. Preprints, Fifteenth Symposium on Boundary Layers and Turbulence, July 15-19, Wageningen, Netherlands, (AMS).
- Newsom, R.K., R.M. Banta, 2002: Sensitivity of wind and temperature retrievals from 4DVAR to prescribed eddy viscosity profiles. Preprints, Fifteenth Symposium on Boundary Layers and Turbulence, July 15-19, Wageningen, Netherland, (AMS).
- Newsom, R.K., and R.M. Banta, 2003: Shear-flow instability in the stable nocturnal boundary layer as observed by Doppler Lidar during CASES-99. *J. Atmos. Sci.*, 60, 16-33.
- Newsom, R.K, and R.M. Banta, 2003: Sensitivity analysis of wind and temperature retrievals from coherent doppler lidar data. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Newsom, R.K., and R.M. Banta, 2004: Assimilating coherent Doppler lidar measurements into a model of the atmospheric boundary layer. Part I: Algorithm development and sensitivity to measurement error. *J. Tech*, 21, 1328-1345.
- Newsom, R.K., and R.M. Banta, 2004: Assimilating coherent Doppler lidar measurements into a model of the atmospheric boundary layer. Part II: Sensitivity analyses. *J. Tech*, 21, 1809-1824.

- Nielsen, M.J., 2005: Remote sensing of water vapor over land using the advanced microwave sounding unit. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 87 pp.
- Nielsen, M.J., A.S. Jones, J.M. Forsythe, and T.H. Vonder Haar, 2004: Effect of antenna pattern correction on AMSU-B radiances. Preprint CD-ROM, Thirteenth Conference on Satellite Meteorology and Oceanography, September 20-24, Norfolk, VA (AMS).
- Nielsen, M.J., and T.H. Vonder Haar, 2005: Remote sensing of water vapor over land using the advanced microwave sounding unit. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 87 pp. [ISSN: 0737-5352-70].
- Nielsen, M.J., P.J. Stephens, A.S. Jones, J.M. Forsythe, R.W. Kessler, and T.H. Vonder Haar, 2006: Impact of AMSU-B antenna pattern corrections on physical profile retrieval methods. *J. Atmos. Ocean. Tech.* (submitted).
- Nobis, T., and R.A. Pielke, 2006: Results and sensitivities of an urban parameterization coupled to the Regional Atmospheric Modeling System (RAMS) over Washington DC. Preprint CD-ROM, Sixth Symposium on Urban Environment, January 29-February 2, Atlanta, GA (AMS).
- Nui, J., L. Carey, P. Yang, J.A. Kankiewicz, T.H. Vonder Haar, 2006: A common microphysical structure for midlevel mixed phase clouds in the mid-latitudes: Results from the Cloud Layer Experiment (CLEX-9). Twelfth Conference on Cloud Physics, July 10-14, 2006, Madison, WI (AMS).
- Pielke Sr., R.A. and T. Vukicevic, 2005: Forum on modeling the atmospheric boundary layer *Bull. Amer. Meteor. Soc.*, 86, 95-96.
- Pielke, Sr., R.A., T. Matsui, G. Leoncini, T. Nobis, U. Nair, E. Lu, J. Eastman, S. Kumar, C. Peters-Lidard, Y. Tian, and R. Walko, 2005: A new paradigm for parameterizations in numerical weather prediction and other atmospheric models. *National Wea. Digest*, 30, 93-99.
- Pielke, Sr., R.A., D. Stokowski, J.-W. Wang, T. Vukicevic, G. Leoncini, T. Matsui, C. Castro, D. Niyogi, C.M. Kishtawal, A. Biazar, K. Doty, R.T. McNider, U. Nair, and W.K. Tao, 2007: Satellite-based model parameterization of diabatic heating. *EOS* (in press).
- Pielke, Sr., R.A., G. Leoncini, T. Matsui, D. Stokowski, J.-W. Wang, T. Vukicevic, C. Castro, D. Niyogi, C.M. Kishtawal, A. Biazar, K. Doty, R.T. McNider, U. Nair, and W.K. Tao, 2006: Development of a generalized parameterization of diabatic heating for use in weather and climate models. Department of Atmospheric Sciences, Colorado State University, Fort Collins, CO, Paper No. 776.

- Poulos, G.S., W. Blumen, D.C. Fritts, J.K. Lundquist, J. Sun, S. Burns, C. Nappo, R.M. Banta, R.K. Newsom, H. Cuxart, E. Terradellas, B. Balsley, M. Jensen, 2002: CASES-99: A comprehensive investigation of the stable nocturnal boundary layer. *Bull. Amer. Meteor. Soc.*, 83, 555-581.
- Raff, D.A., 2002: Evolution of drainage networks and hillslopes. Ph.D. dissertation, Department of Civil Engineering, Colorado State University, Fort Collins, CO, 153 pp.
- Raff, D.A. and J.A. Ramírez, 2002: Physical, mechanistic hillslope hydrology model: development and applications. Proceedings, Twenty-Second Hydrology Days, April 1-4, Colorado State University, Fort Collins, CO, p. 224-232 (AGU).
- Raff, D.A., J.A. Ramirez, and J.L. Smith, 2004: Hillslope drainage development with time: a physical experiment. *Geomorphology*, 62, 169-180.
- Raff, D.A. and J.A. Ramirez, 2005: A physical, mechanistic and fully coupled hillslope hydrology model. *International Journal of Numerical Methods in Fluids*, DOI: 10.1002/_d.1016; 20 pp.
- Rapp, D., 2007: Passive microwave measurement of soil moisture using WindSat. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, 211 pp.
- Rapp, D., M. Mungiole, A.S. Jones, C.L. Combs, and G. McWilliams, 2006: Sensitivity of the MWLSM and its comparison with the CMIS model. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 60 pp. [ISSN: 0737-5352-75].
- Reasor, P.D., and M.T. Montgomery, 1999: Diagnosing the QBO's influence on circumpolar vortex variability using MSU brightness temperatures and MSU-derived winds. *Mon. Wea. Rev.*, 127, 46-56.
- Reinke, D.L., R.P. Fleishauer, V.E. Larson, J.A. Kankiewicz, J.M. Davis, J.M. Forsythe, T.H. Vonder Haar, and S.K. Cox, 2000: An overview of the Complex Layered Cloud Experiment (CLEX-5) field campaign during the period Nov-Dec 1999. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Reinke, D.L., J.M. Forsythe, and T.H. Vonder Haar, 2000: Climatological and historical analysis of cloud for environmental simulations database for the 1997-98 data year (CHANCES 97). Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).

- Reinke, D.L., J.M. Forsythe, T.H. Vonder Haar, K.R. Dean, and S. Woo, 2001: Multi-scale global cloud and water vapor database for battlespace applications. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Reinke, D.L., J.M. Forsythe, J.A. Kankiewicz, K.R. Dean, C.L. Combs, 2003: Development and applications for regional cloud products from the CHANCES global cloud database. Preprint CD-ROM, 12th Satellite Meteorology Conference, February 9-13, Long Beach, CA (AMS).
- Reinke, D.L., J.M. Forsythe, J.A. Kankiewicz, and C.L. Combs, 2003: Improved infrared cloud analysis and regional cloud products from the chances global cloud database. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Reinke, D.L., K.E. Eis, and T.H. Vonder Haar, 2006: Cloud-free line of sight (CFLOS) derived from CloudSat radar data. Preprint CD-ROM, AGU Fall Meeting, December 11-15, San Francisco, CA.
- Rojas-Sanchez, R., 2003: GIS-based upland erosion modeling, geovisualization and grid size effects on erosion simulations with CASC2D-SED. Ph.D. dissertation, Department of Civil Engineering, Colorado State University, Fort Collins, CO, 106 pp.
- Rojas, R., and P.Y. Julien, 2002: Modeling sediment transport with CASC2D-SED. Proceedings, Twenty-Second Hydrology Days, April 1-4, CSU, Fort Collins, CO (AGU).
- Rojas, R., and P.Y. Julien, 2002: Grid resolution effects on upland erosion predictions. Proceedings CD, Second Federal Interagency Hydrologic Modeling Conference, July 28 - August 1, Las Vegas, NV (Advisory Committee on Water Information, USGS).
- Rojas, R., and P.Y. Julien, 2006: Washload erosion modeling with CASC2D-SED. *J. Hydraul. Eng.* (submitted).
- *Roohr, P.B., 1999: An analysis of the incorporation of lightning into the nowcasting of enhanced frozen precipitation. Proceedings, Eastern Snow Conference, June 2-4, Fredricton, NB, Canada.
- Roohr, P.B. and T.H. Vonder Haar, 2002: A correlation of snow crystal phenomenology to radar patterns and lightning activity in winter storms. Postprints, Eleventh Conference on Cloud Physics, June 3-7, Ogden, UT (AMS).

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- Roohr, P.B., and T.H. Vonder Haar, 2002: An analysis of the incorporation of lightning into the nowcasting of enhanced frozen precipitation. Preprints, Weather Analysis and Forecasting Conference, August 12-16, San Antonio, TX (AMS).
- Roohr, P.B. and G. Brooks, 2002: An analysis of MM5 performance for four major snowstorms over the Korean Peninsula. Preprints, Weather Analysis and Forecasting Conference, August 12-16, San Antonio, TX (AMS).
- Ruston, B., 2004: Characteristics of summertime microwave land emissivity over the conterminous United States. Ph.D. dissertation, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 126 pp.
- Ruston, B.C., T.H. Vonder Haar, and J.M. Forsythe, 2001: Imagery interpretation of microwave observations by AMSU and TMI over a complex tropical region. Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (AMS).
- Ruston, B.C., T.H. Vonder Haar, D.S. McKague, and J. Wang, 2002: A preliminary look into spectral microwave emissivities over the continental U.S. Postprints, Eleventh Conference on Atmospheric Radiation, June 3–7, Ogden, UT (AMS).
- Ruston, B., T.H. Vonder Haar, and A.S. Jones, 2003: Microwave land emissivity over complex terrain. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Ruston, B., and T.H. Vonder Haar, 2004: Characteristics of summertime microwave emissivities from the Special Sensor Microwave Imager over the conterminous United States. *J. Geophys. Res.*, 109, D19103.
- Ruston, B., and T.H. Vonder Haar, 2004: Characteristics of summertime microwave land emissivity over the conterminous United States. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 126 pp. [ISSN: 0737-5352-64].
- Ruston, B., and T.H. Vonder Haar, 2004: Characteristics of summertime microwave emissivities from the Special Sensor Microwave Imager over the conterminous United States. *J. Geophys. Res.*, 109, D19103.
- Saitwal, K., M.R. Azimi-Sadjadi, and D. Reinke, 2001: Study of a multi-channel temporally adaptable system for continuous cloud classification from GOES imagery. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Saitwal, K., M.R. Azimi-Sadjadi, and D. Reinke, 2003: A multi-channel temporally adaptive system for continuous cloud classification from Satellite Imagery. *IEEE Trans. Geosci. Remote Sensing*, 41(5), 1098-1104.

- Saleeby, S.M., W.Y.Y. Cheng, and W.R. Cotton, 2007: New developments in the Regional Atmospheric Modeling System suitable for simulating snowpack augmentation over complex terrain. *J. Wea. Mod.*, (submitted).
- Sample, L.B., 2005: Sensitivity analysis for the retrieval of aerosol optical properties from measured reflectances. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, 114 pp.
- Schubert, W.H., and M.T. Masarik, 2006: Potential vorticity aspects of the MJO. *Dynam. Atmos. Oceans.*, 42(2006), 127-151.
- Schuster, D.C., 2001: Prototype real time boundary layer prediction in support of the CASES-99. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 109pp.
- Schuster, D.C., W.R. Cotton, and R.L. Walko, 2000: A prototype realtime boundary layer forecast model running on clusters of PCs. Proceedings CD (poster), Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Schuster, D.C., W.R. Cotton, and R.L. Walko, 2001: Prototype real-time boundary layer prediction in support of the CASES-99 nocturnal boundary layer experiment. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Seaman, C.J., 2003: Observed and calculated properties of mid-level, mixed-phase clouds. Masters thesis, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, 92 pp.
- Seaman, C.J., and T.H. Vonder Haar, 2003: Observed and calculated properties of mid-level, mixed-phase clouds. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 92 pp. [ISSN: 0737-5352-63].
- Seaman, C.J., J.A. Kankiewicz, J.M. Davis, and K.E. Eis, 2005: Simulated transmissivity of mid-level, mixed-phase clouds. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 11-15, Monterey, CA.
- Seaman, C.J., T. Vukicevic, and T.H. Vonder Haar, 2006: Assimilation of GOES radiances to improve forecasting of mid-level, mixed phase clouds. Preprint CD-ROM, Fourteenth Conference on Satellite Meteorology and Oceanography, January 29-February 2, Atlanta, GA (AMS).
- Sengupta, M., T. Vukicevic, A.S. Jones, and T.H. Vonder Haar, 2005: Assimilation of satellite radiances to improve cloud analysis and short term mesoscale prediction. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2005 Conference, October 11-15, Monterey, CA (ARL).

- Smith, A.J., B.M. Griffin, J-Ch. Golaz, and V.E. Larson 2006: Comparison of large-eddy simulations with a single-column model: implications for mid-level cloud parameterization. Preprint CD-ROM, Twelfth Conference on Cloud Physics, July 10-14, Madison, WI (AMS).
- Stephens, P.J., and A.S. Jones, 2002: Derivation and analysis of a computationally efficient discrete Backus-Gilbert footprint-matching algorithm. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 59 pp. [ISSN: 0737-5352-55].
- Stephens, P.J., and A.S. Jones, 2002: A computationally efficient discrete Backus-Gilbert footprint-matching algorithm. *IEEE Trans. Geosci. Remote Sensing.*, 40(8), 1865-1878.
- Stephens, P.J., and A.S. Jones, 2005: Adaptable implementation of the Backus-Gilbert method. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2005 Conference, October 11-15, Monterey, CA (ARL).
- Stephens, P.J., and A.S. Jones, 2006: Bounds on the variance in the pattern matching criteria. *IEEE Trans. Geosci. Remote Sensing*, 44(9), 2514-2522. 10.1109/TGRS.2006.875442.
- Stephens, P.J., and A.S. Jones, 2007: Geometrical variations of gain patterns. *IEEE Trans. Geosci. Remote Sens.*, 45(2), 376-382.
- Stephens, P.J., and A.S. Jones, 2007: General implications of a discrete Backus-Gilbert spatial filter for microwave radiometer data. *J. Atmos. and Oceanic Tech.*, (resubmitted, April).
- Stokowski, D.M., 2005: The addition of the direct radiative effect of atmospheric aerosols into the regional atmospheric modeling system (RAMS). Masters thesis, Department of Atmospheric Sciences, Colorado State University, Fort Collins, CO, 81 pp. Also available as ATS Paper No. 764.
- Stokowski, D.M., W.R. Cotton, 2005: Addition of the aerosol direct effect to the Colorado State University regional atmospheric modeling system (CSU-RAMS). On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2005 Conference, October 11-15, Monterey, CA (ARL).
- Sun J., D.H. Lenschow, S.P. Burns, R.M. Banta, R.K. Newsom, R.L. Coulter, S. Frasier, T. Ince, C. Nappo, B. Balsley, M. Jensen, D. Miller, B. Skelly, J. Cuxart, W. Blumen, X. Lee, and X.Z. Hu, 2002: Intermittent turbulence associated with a density current passage in the stable boundary layer. *Boundary Layer Meteor.*, 105, 199-219.
- Tian, B., M.R. Azimi-Sadjadi, and W.F. Gao, 2001: Comparison of two different PNN training approaches for satellite cloud data classification. Proceedings, IEEE International Conference on Neural Networks (ICNN'99), July 1999, Washington, DC, *IEEE Trans. Neural Networks*, 12(1), 164-168.

- Velleux, M.L., 2005: Spatially distributed model to assess watershed containment transport and fate. Ph.D. dissertation, Department of Civil Engineering, Colorado State University, Fort Collins, CO, 261 pp.
- Velleux, M.L., P.Y. Julien, R. Rojas-Sanchez, W.H. Clements, and J.F. England, Jr., 2006: Simulation of metals transport and toxicity at a mine-impacted watershed: California Gulch, Colorado. *Environ. Sci. Technol.*, 40(22), 6996-7004.
- Volz, K.P., S.J. Cooper, J.M. Davis, and S.K. Cox, 2000: Inference of cloud optical properties with the 2FOV radiometer. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Vonder Haar, T.H., 2001: Some new operational applications of METSAT observations. Preprints, Eleventh Conference on Satellite Meteorology and Oceanography, October 15-18, Madison, WI (invited presentation) (AMS).
- Vonder Haar, T.H., J.M. Forsythe, D.L. Randel, and R.J. Engelen, 1999: Comparison of new TOVS upper tropospheric moisture retrieval with other water vapor datasets. Preprints, Tenth Conference on Atmospheric Radiation, June 28 - July 2, Madison, WI, 244-250 (AMS).
- Vonder Haar, T.H., M.A. Ringerud, and D.L. Reinke, 2000: High-resolution space/time variations of cloud conditions from the CHANCES data set. Preprints, Tenth Conference on Satellite Meteorology and Oceanography, January 9-14, Long Beach, CA, 391-392 (AMS).
- Vonder Haar, T.H., K.R. Dean, J.M. Forsythe, T.J. Greenwald, and S.Q. Kidder, 2001: Comparison of satellite and ground-based measurements of cloud liquid water in several climate zones. Proceedings CD (poster), International Geophysics and Remote Sensing Symposium (IGARSS) 2001, July 9-13, Sydney, Australia (IEEE).
- Vonder Haar, T.H., J.M. Forsythe, T.J. Greenwald, S.Q. Kidder, and K.R. Dean, 2001: Comparison of satellite and ground-based measurements of cloud liquid water in several climate zones. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Vonder Haar, T.H., J.M. Forsythe, J. Luo, D.L. Randel, S. Woo, 2005: Water vapor trends and variability from the global NVAP dataset. Preprint CD-ROM, Sixteenth Conference on Climate and Variability and Change, January 9-13, San Diego, CA (AMS).
- Vonder Haar, T.H., J.M. Forsythe, R.W. Kessler, 2006: A pilot study of scientific data stewardship with global water vapor. Preprint CD-ROM, Fourteenth Conference on Satellite Meteorology and Oceanography, January 29-February 2, Atlanta, GA (AMS).

- Vukicevic, T., 1999: Advection algorithms in the context of variational data assimilation. Proceedings, Third WMO International Symposium on Assimilation of Observations in Meteorology and Oceanography, June 7-10, Quebec City, MN, Canada.
- Vukicevic, T., 2000: Adjoint analysis of stratocumulus cloud formations. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2000 Conference (also on web site), April 24-27, Fort Collins, CO (ARL).
- Vukicevic, T., and P. Hess, 2000: Analysis of tropospheric transport in the Pacific basin using the adjoint technique. *J. Geophys. Res.-Atmos.*, 105 (D6), 7213-7230.
- Vukicevic, T., M. Ghemires, and R. Hertenstein, 2000: Mesoscale adjoint analysis and data assimilation: development of RAMS adjoint. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Vukicevic, T., T. Greenwald, R. Hertenstein, and M. Ghemires, 2001: Use of cloudy radiance observations in mesoscale data assimilation. Preprints, Fifth Symposium on Integrated Observing Systems, January 14-19, Albuquerque, NM (AMS).
- Vukicevic, T., and T. Greenwald, 2001: 4DVAR cloudy radiance assimilation with a mesoscale model. Abstracts, Eight Scientific Assembly of the International Association of Meteorology and Atmospheric Sciences, Symposium on Satellite Data Assimilation in Numerical Models, July 10-18, Innsbruck, Austria, 57 (IAMAS).
- Vukicevic, T., B. Braswell, and D. Schimel, 2001: A diagnostic study of temperature controls on global terrestrial carbon exchange. *Tellus*, 53B, 150-170.
- Vukicevic, T., M. Steysksal, and M. Hecht, 2001: Properties of advection algorithms in the context of variational data assimilation. *Mon. Wea. Rev.*, 129, 1221-1231.
- Vukicevic, T., T. Greenwald, D. Zupanski, and M. Zupanski, 2001: New parallel RAMS 4DVAR data assimilation algorithm applied to GOES radiance measurements. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Vukicevic, T., M. Zupanski, D. Zupanski, T.J. Greenwald, A.S. Jones, T.H. Vonder Haar, D. Ojima, and R. Pielke, 2002: An overview of a mesoscale 4DVAR data assimilation research model: RAMDAS. Preprints, Third Symposium on Observations, Data Assimilation, and Probabilistic Prediction, January 13-17, Orlando, FL (AMS).
- Vukicevic, T., M. Zupanski, D. Zupanski, T.J. Greenwald, 2002: Assimilation of cloudy radiance measurements using regional atmospheric modeling and data assimilation system at CIRA. Preprints, Symposium on Observations, Data Assimilation, and Probabilistic Prediction, January 13-17, Orlando, FL (AMS).

- Vukicevic, T., M. Zupanski, D. Zupanski, T.J. Greenwald, T. Vonder Haar, 2003: Potential impact of visible and infrared satellite measurements in cloud data assimilation. Preprints, Twelfth Satellite Conference on Satellite Meteorology, February 9-13, Long Beach, CA (AMS).
- Vukicevic, T., D. Zupanski, T.H. Vonder Haar, and A.S. Jones, 2003: Mesoscale cloud state estimation from visible and infrared radiances. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2003, September 9-11, Monterey, CA (NRL).
- Vukicevic, T., T.J. Greenwald, M. Zupanski, D. Zupanski, T. Vonder Haar and A.S. Jones, 2004: Mesoscale cloud state estimation from visible and infrared satellite radiances. *Mon. Wea. Rev.* 132(12), 3066-3077.
- Vukicevic, T., E. Kalnay, T. Vonder Haar, 2004: The need for a national data assimilation education program. *Bull. Amer. Meteor. Soc.*, 85(1), 48-49.
- Vukicevic, T., M. Sengupta, T. Vonder Haar, A. Jones, and F. Evans, 2004: 4D assimilation of cloudy satellite radiances. Preprint CD-ROM, Thirteenth Conference on Satellite Meteorology and Oceanography, September 20-24, Norfolk, VA (AMS).
- Vukicevic, T., M. Sengupta, A. Jones and T. Vonder Haar, 2005: 4DDATA assimilation of the GOES imager IR radiances in cloudy conditions. Preprint CD-ROM, Ninth Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (9IOASAOLS). January 9-13, San Diego, CA (AMS).
- Vukicevic, T., M. Sengupta, A. Jones and T. Vonder Haar, 2006: Cloud resolving satellite data assimilation: Information content of IR window observations and uncertainties in estimation. *J. Atmos. Sci.*, 63(3), 901-919.
- Wang, J., 2002: Cloud classification and cloud base height estimation using neural networks. Masters thesis, Department of Electrical and Computer Engineering, Colorado State University, Fort Collins, Colorado, 107 pp.
- Wang, J., 2002: A pixel-based temporally adaptable approach for cloud classification. Preprints, IGARSS'2002, June 24-28, Toronto, Canada.
- Wang, J., M.R. Azimi-Sadjadi, and D.L. Reinke, 2001: A pixel-based cloud classification approach. Proceedings CD, Battlespace Atmospheric and Cloud Impacts on Military Operations (BACIMO) 2001 Conference, July 10-12, Fort Collins, CO (ARL).
- Wang, J., M.R. Azimi-Sadjadi, and D. Reinke, 2004: A temporally adaptive classifier for multi-spectral imagery. *IEEE Trans. Neural Networks*, 15 (1), 159-165.

- Wang, N., and C. Matsumoto, 2005: A comparison study of data compression techniques for the battle-scale forecast model grids. On web site, Battlespace Atmospheric and Cloud Impacts on Military Operations Conference (BACIMO) 2005, October 12-14, Monterey, CA (NRL).
- Wang, N., and C. Matsumoto, 2006: A comparison study of data compression techniques for the battle-scale forecast model grids. CIRA Technical Report, Colorado State University, Fort Collins, Colorado, 11 pp. [ISSN: 0737-5352-76].
- Wells, K., M. Witek, P. Flatau, S. Kreidenweis, and D. Westphal, 2007: An analysis of seasonal surface dust aerosol concentrations in the western U.S. (2001-2004): Observations and model predictions. *Atmos. Environ.*, (accepted).
- Wichern, G., 2006: Adaptive methods for rapid acoustic transmission loss prediction in the atmosphere. Masters thesis, Department of Electrical and Computer Engineering, Colorado State University, Fort Collins, Colorado, 165 pp.
- Wichern, G., M.R. Azimi-Sadjadi, M. Mungiole, 2005: Environmentally adaptive acoustic transmission loss prediction with neural networks. Proceedings, 2005 Unattended Ground Sensor Technologies and Applications Conference, SPIE Defense and Security Symposium, March 28-April 1, Orlando, FL.
- Wichern, G. and M.R. Azimi-Sadjadi, 2006: An environmentally adaptive system for rapid acoustic transmission loss prediction. Proceedings DVD-ROM, IEEE World Congress on Computational Intelligence Conference, July 16-21, Vancouver B.C., Canada.
- Wichern, G., M.R. Azimi-Sadjadi, M. Mungiole, 2007: Environmentally adaptive acoustic transmission loss prediction in turbulent and non-turbulent atmospheres. *Neural Networks Journal*, (accepted).
- Worthington, R.M., R.M. Banta, R.K Newsom, J.K. Lundquist, M.L. Jensen, A. Muschinski, R.G. Frehlich, and B.B. Balsley, 2000: Combined lidar and in-situ measurements of waves in the stable night-time boundary layer above Kansas. Fourteenth Symposium on Boundary Layers and Turbulence, August 7-11, Aspen, CO (AMS).
- Zupanski, D., 2005: Quantifying and reducing uncertainty by employing model error estimation methods. Pre-print CD-ROM, Eighty-fifth American Meteorological Society Annual Meeting, Ed Lorenz Symposium, January 9-13, San Diego, CA.
- Zupanski, M., 2005: Maximum likelihood ensemble filter: theoretical aspects. *Mon. Wea. Rev.*, 133, 1710-1726.
- Zupanski, M., D. Zupanski, T. Vukicevic, T. Greenwald, K. Eis, and T. Vonder Haar, 2002: Impact of forecast and model error correlation in 4DVAR data assimilation. 27th General Assembly of the European Geophysical Society, April 21-26, Nice, France Geophysical Research Abstracts, 4, EGS02-A-01441.

Zupanski, M., D. Zupanski, T. Vukicevic, K. Eis, and T. Vonder Haar, 2005: CIRA/CSU four-dimensional variational data assimilation system, *Mon. Wea. Rev.*, 829-843.

Zupanski, M. and D. Zupanski, 2006: Model error estimation employing an ensemble data assimilation approach. *Mon. Wea. Rev.*, 134(5), 1337-1354.