

Key Faculty Peer Reviewed Publications in 2011

Dr. Newchurch

- 1) Kuang, S., M. J. Newchurch, J. Burris, L. Wang, P. I. Buckley, S. Johnson, K. Knupp, G. Huang, D. Phillips, and W. Cantrell (2011), Nocturnal Ozone Enhancement in the Lower Troposphere Observed by Lidar, *Atmospheric Environment*, vol. 49, pp. 6078-6084, Jul. 2011, doi:10.1016/j.atmosenv.2011.07.038.
- 2) Pour-Biazar, A., M. Khan, L. Wang, Y. Park, M. Newchurch, R. T. McNider, X. Liu, D. W. Byun, and R. Cameron (2011), Utilization of satellite observation of ozone and aerosols in providing initial and boundary condition for regional air quality studies, *J. Geophys. Res.*, 116, D18309, doi:10.1029/2010JD015200.
- 3) Kim, J. H., Kim, S. M., Baek, K. H., Wang, L., Kurosu, T., De Smedt, I., Chance, K., and Newchurch, M. J.: Evaluation of satellite-derived HCHO using statistical methods, *Atmos. Chem. Phys. Discuss.*, 11, 8003-8025, doi:10.5194/acpd-11-8003-2011, 2011.
- 4) Lamsal, L. N., R. V. Martin, A. Padmanabhan, A. van Donkelaar, Q. Zhang, C. E. Sioris, K. Chance, T. P. Kurosu, M. J. Newchurch (2011), Application of satellite observations for timely updates to global anthropogenic NO_x emission inventories, *Geophys. Res. Lett.*, doi:10.1029
- 5) Hogrefe, C., Hao, W., Zalewsky, E. E., Ku, J.-Y., Lynn, B., Rosenzweig, C., Schultz, M. G., Rast, S., Newchurch, M. J., Wang, L., Kinney, P. L., and Sistla, G.: An analysis of long-term regional-scale ozone simulations over the Northeastern United States: variability and trends, *Atmos. Chem. Phys.*, 11, 567-582, doi:10.5194/acp-11-567-2011
- 6) Kuang, S.; Burris, J. F.; Newchurch, M. J.; Johnson, S.; Long, S.; , "Differential Absorption Lidar to Measure Subhourly Variation of Tropospheric Ozone Profiles," *Geoscience and Remote Sensing, IEEE Transactions on* , vol.49, no.1, pp.557-571, Jan. 2011, doi: 10.1109/TGRS.2010.2054834

Dr. Carey

- 1) Schultz, C. J., W. A. Petersen, and L. D. Carey, 2011: Lightning and severe weather: A comparison between total and cloud-to-ground lightning trends. *Weather and Forecasting*, 26, 744-755.
- 2) Anderson, M. E., L. D. Carey, W. A. Petersen, and K. R. Knupp, 2011: C-band dual-polarimetric radar signatures of hail. *Electronic Journal of Operational Meteorology*, 2011-EJ2.
- 3) Mosier, R. M., C. Schumacher, R. E. Orville, and L. D. Carey, 2011: Radar nowcasting of cloud-to-ground lightning over Houston, Texas. *Weather and Forecasting*, 26, 199–212.
- 4) Marks, D. A., D. B. Wolff, L. D. Carey, and A. Tokay, 2011: Quality control and calibration of the dual-polarization radar at Kwajalein, RMI. *Journal of Atmospheric and Oceanic Technology*, 28, 181–196.

Dr. Mecikalski

1. Mecikalski, J. R., P. D. Watts, and M. Koenig, 2011: Use of Meteosat Second Generation optimal cloud analysis fields for understanding physical attributes of growing cumulus clouds. *Atmos. Res.*, 102, 175-190.
2. Gambill, L. D., and J. R. Mecikalski, 2011: A satellite-based summer convective cloud frequency analysis over the Southeastern United States. *J. Appl. Meteor. Climatol.*, 50, 1756-1769.
3. Hain, C. R., W. T. Crow, J. R. Mecikalski, M. C. Anderson, and T. Holmes, 2011: An intercomparison of available soil moisture estimates from thermal infrared and passive microwave remote sensing and land surface modeling. *J. Geophys. Res.*, 116, doi:10.1029/2011JD015633.
4. Anderson, M. C., C. Hain, B. Wardlow, A. Pimstein, J. R. Mecikalski, and W. P. Kustas, 2011: Evaluation of drought indices based on thermal remote sensing of evapotranspiration over the Continental United States. *J. Climate*, 24, 2025–2044.
5. Anderson, M. C., W. P. Kustas, J. M. Norman, C. R. Hain, J. R. Mecikalski, L. Schultz, M. P. González-Dugo, C. Cammalleri, G. d'Urso, A. Pimstein, and F. Gao, 2011: Mapping daily evapotranspiration at field to continental scales using geostationary and polar orbiting satellite imagery. *Hydrol. Earth Syst. Sci.*, 15, 223-239.

Dr. Knupp

1. Coleman, T. A., K. R. Knupp, J. Spann, J. B. Elliott, and J. B. DeBlock, 2011: The history and future of tornado warning dissemination in the United States, *Bull. American Met. Soc.*, 92, 567-582.
2. Anderson, M.E., L.D. Carey, W.A. Petersen, and K.R. Knupp, 2011: C-band dual-polarimetric radar signatures of hail. *NWA Electronic Journal of Operational Meteorology*.
3. Coleman, T. A., and K. R. Knupp, 2011: A review of three significant wake lows over Alabama and Georgia. *Weather and Forecasting*, 26, 766-773.
4. Asefi-Najafabady, S., K. Knupp, J. Mecikalski, R.M. Welch, D. Philips, 2011: Radar observations of mesoscale circulations induced by a small lake under varying synoptic scale flows. *J. Geophys Research*, 117, D01106, doi:10.1029/2011JD016194.
5. Kuang, S., M. J. Newchurch, J. Burris, L. Wang, P. I. Buckley, S. Johnson, K. Knupp, G. Huang, D. Phillips, and W. Cantrell (2011), Nocturnal ozone enhancement in the lower troposphere observed by lidar, *Atmospheric Environment*, 45, 6078-6084.

Dr. Christopher

1. Christopher, S. A. (2011), Satellite remote sensing methods for estimating clear Sky shortwave Top of atmosphere fluxes used for aerosol studies over the global oceans, *Remote Sensing of Environment*, 115(12), 3002-3006.
2. Christopher, S. A., P. Gupta, B. Johnson, C. Ansell, H. Brindley, and J. Haywood (2011), Multi-sensor satellite remote sensing of dust aerosols over North Africa during GERBILS, *Quarterly Journal of the Royal Meteorological Society*, 137(658), 1168-1178.
3. Fairman, J. G., Jr., U. S. Nair, S. A. Christopher, and T. Mölg (2011), Land use change impacts on regional climate over Kilimanjaro, *J. Geophys. Res.*, 116(D3), D03110.

4. Haywood, J. M., et al. (including S.A. Christopher) (2011), Motivation, rationale and key results from the GERBILS Saharan dust measurement campaign, *Quarterly Journal of the Royal Meteorological Society*, 137(658), 1106-1116.
5. Johnson, B. T., M. E. Brooks, D. Walters, S. Woodward, S. Christopher, and K. Schepanski (2011), Assessment of the Met Office dust forecast model using observations from the GERBILS campaign, *Quarterly Journal of the Royal Meteorological Society*, 137(658), 1131-1148.
6. Jones, T. A., and S. A. Christopher (2011), A reanalysis of MODIS fine mode fraction over ocean using OMI and daily GOCART simulations, *Atmos. Chem. Phys.*, 11(12), 5805-5817.
7. Jones, T. A., and S. A. Christopher (2011), A multi-sensor approach for assessing the impacts of ultraviolet-absorbing aerosols on top of atmosphere radiative fluxes, *International Journal of Remote Sensing* 32(16), 4659-4682.
8. Jones, T. A., and S. A. Christopher (2011), Assessment of Temperature and Humidity Changes Associated With the September 2009 Dust Storm in Australia, *Geoscience and Remote Sensing Letters, IEEE*, 8(2), 268-272.
9. Nair, U. S., R. McNider, F. Patadia, S. A. Christopher, and K. Fuller (2011), Sensitivity of nocturnal boundary layer temperature to tropospheric aerosol surface radiative forcing under clear-sky conditions, *J. Geophys. Res.*, 116(D2), D02205.
10. Patadia, F., S. A. Christopher, and J. Zhang (2011), Development of empirical angular distribution models for smoke aerosols: Methods, *J. Geophys. Res.*, 116(D14), D14203.
11. Superczynski, S. D., and S. A. Christopher (2011), Exploring Land Use and Land Cover Effects on Air Quality in Central Alabama Using GIS and Remote Sensing, *Remote Sensing*, 3(12), 2552-2567.
12. Yang, E.-S., S. A. Christopher, S. Kondragunta, and X. Zhang (2011), Use of hourly Geostationary Operational Environmental Satellite (GOES) fire emissions in a Community Multiscale Air Quality (CMAQ) model for improving surface particulate matter predictions, *J. Geophys. Res.*, 116(D4), D04303.

Dr. Christy

1. Christy, J.R., 2012: Searching for information in 133 years of California snowfall observations. *J. Hydrometeor.* DOI:10.1175/HJM-D-11-040.1
2. Thorne, P.W., K.M. Willett, R.J. Allan, S. Bojinski, J.R. Christy, N. Fox, S. Gilbert, I. Jolliffe, J.J. Kennedy, E. Kent, A.K. Tank, J. Lawrimore, D.E. Parker, N. Rayner, A. Simmons, L. Song, P.A. Stott and B. Trewin, 2011: Guiding the creation of a comprehensive surface temperature resource for twenty-first-century climate science. *Bull. Amer. Meteor. Soc.* DOI:10.1175/2011BAMS3124.1
3. Fall, S., A. Watts, J. Nielsen-Gammon, E. Jones, D. Niyogi, J. Christy and R. Pielke, Sr., 2011: Analysis of the impacts of station exposure on the U.S. Historical Climatology Network

temperatures and temperature trends. *J. Geophys. Res.* 116, D14120,
DOI:10.1029/2010JD015146.

4. McNider, R.T., J.R. Christy, D. Moss, K. Doty, C. Handyside, A. Limaye, A. Garcia and G. Hoogenboom, 2011: A real-time gridded crop model for assessing spatial drought stress on crops in the Southeastern United States. *J. App. Meteor. Clim.*, 50, 1459-1475,
DOI:10.1175/2011JAMC2476.1