
Luca Delle Monache

National Center for Atmospheric Research
Research Applications Laboratory
PO Box 3000
Boulder, CO 80307-3000

voice: (303) – 497 2736
fax: (303) – 497 8386
lucadm@ucar.edu
www.rap.ucar.edu/staff/lucadm-staff.php

EDUCATION

- 2002 – 2005 **Ph.D. in Atmospheric Sciences**
Atmospheric Science Programme, University of British Columbia, Vancouver, Canada
Thesis: Ensemble-averaged, probabilistic, and Kalman-filtered ozone regional forecasts
Supervisor: Prof. Roland Stull
- 1999 – 2002 **M.S. in Meteorology**
Department of Meteorology, San José State University, California
Thesis: Aerosol property comparison within and above the ABL at the ARM SGP site
Supervisors: Prof. Kevin Perry and Prof. Robert Bornstein
- 1991 – 1997 **Laurea (~M.S.) in Mathematics**
Department of Mathematics, University of Rome “La Sapienza”, Italy
Thesis: Implementation of CALGRID photochemical model on parallel architecture Quadrics
Supervisor: Prof. Patrizia Mentrasti
-

RESEARCH/WORK HISTORY

- 03/2009 – present **Project Scientist II**
National Center for Atmospheric Research, Boulder, Colorado, USA
- Numerical weather prediction, post-processing/calibration, wind energy applications
 - Data assimilation for meteorology/air-quality/dispersion
 - Analog-based probabilistic predictions
- 11/2006 – 02/2009 **Staff Scientist**
Lawrence Livermore National Laboratory, California, USA
- Meteorology/air-quality/dispersion modeling, ensemble forecasting and Kalman filtering
 - Data assimilation and urban parameterizations for meteorology/air-quality/dispersion
 - Inverse modeling via Bayesian inference and stochastic sampling for regional fossil fuel emission estimates
- 01/2006 – 10/2006 **Postdoctoral Researcher**
Lawrence Livermore National Laboratory, California, USA
- Meteorology/air-quality/dispersion modeling, ensemble forecasting and Kalman filtering
 - Data assimilation for meteorology/air-quality/dispersion
 - Inverse modeling via Bayesian inference and stochastic sampling for source reconstruction
- 09/2002 – 12/2005 **Graduate Research Assistant**
University of British Columbia – British Columbia, Canada
- Meteorology/Air-quality/dispersion ensemble forecasting, and Kalman-filter post-processing
- 01/2002 – 08/2002 **Research Assistant**
Institute of Atmospheric Sciences and Climate – Italy
- Principal components analysis of mixing height, precipitable water and aerosol data
- 09/1999 – 12/2001 **Graduate Research Assistant**
Lawrence Livermore National Laboratory / San José State University – California, USA
- Vertical structure of aerosol properties analysis
 - Atmospheric Radiation Measurement program remote sensing data analysis
- 01/1998 – 08/1999 **Graduate Fellow**
Italian Agency for New Technology, Energy and Environment – Italy
- Testing new parallel platform; development of a Photochemical Lagrangian Particle Model

PUBLICATIONS

Chapter in Book

1. **Delle Monache, L.**, 2011. Ensemble-based Air Quality Predictions. Chapter in *Air Quality Modeling – Theories, Methodologies, Computational Techniques, and Available Databases and Software, Vol. IV – Advances and Updates*. Ed. Zannetti, Pub. Air & Waste Management Association (A&WMA), USA

Peer Review Journals (published / in press / accepted)

1. Hirschberg , P., Abrams, E., Bleistein, A., Bua, W., **Delle Monache, L.**, Dulong, T., Gaynor, J., Glahn, B., Hamill, T., Hansen, J., Hilderbrand, D., Hoffman, R., Morrow, B., Philips, B., Sokich, J., Stuart, N., 2011: A weather and climate enterprise strategic implementation plan for generating and communicating forecast uncertainty information. Accepted to appear on the *Bulletin of the American Meteorological Society*
2. **Delle Monache, L.**, Nipen, T., Liu, Y., Roux, G., Stull, R., 2011: Kalman filter and analog schemes to post-process numerical weather predictions. *Monthly Weather Review*, in press
3. Djalalova, I., Wilczak, J., McKeen, S., Grell, G., Peckham, S., Pagowski, M., **Delle Monache, L.**, McQueen, J., Lee, P., Tang, Y., McHenry, J., Gong, W., Bouchet, V., Marthur, R., 2010. Ensemble and bias-correction techniques for probabilistic forecast of surface O3 and PM2.5 during the TEXAQS-II experiment of 2006. *Atmospheric Environment*, 44, 455-467
4. **Delle Monache, L.**, Weil, J., Simpson, M., Leach, M., 2009. A new urban boundary layer and dispersion parameterization for the LLNL modeling system: tests with the Joint Urban 2003 data set. *Atmospheric Environment*, 43, 5807-5821
5. **Delle Monache, L.**, 2009. Ricostruzione di una sorgente atmosferica a partire da misure sottovento: un metodo basato su inferenza Bayesiana e Markov Chain Monte Carlo sampling. *Rivista di Meteorologia* (in Italian), 1, 12-21
6. **Delle Monache, L.**, Lundquist, J., Kosovic, B., Johannesson, G., Dyer, K., Aines, R., Chow, F., Belles, R., Hanley, W., Larsen, S., Loosmore, G., Nitao, J., Sugiyama, G., Vogt, P., 2008. Bayesian inference and Markov Chain Monte Carlo to reconstruct a contaminant source at continental scale. *Journal of Applied Meteorology and Climatology*, 47, 2600-2613
7. Pryor, S. C., Barthelmie, R. J., Schoof, J. T., Binkowski, F. S., **Delle Monache, L.**, and Stull, R. B., 2008. Modeling the impact of sea-spray on particle concentrations in a coastal city. *Science of the Total Environment*, 391, 132-142
8. **Delle Monache, L.**, Wilczak, J., McKeen, S., Grell, G., Pagowski, M., Peckham, S., Stull, R., McHenry, J., and McQueen, J., 2008. A Kalman-filter bias correction of ozone deterministic, ensemble-averaged, and probabilistic forecasts. *Tellus B*, 60, 238-249
9. Monforti, F., Vitali, L., Pagnini, G., Lorenzini, R., **Delle Monache, L.**, and Zanini, G., 2006. Testing Kernel density reconstruction in Lagrangian photochemical modelling. *Atmospheric Environment*, doi:10.1016/j.atmosenv.2006.07.046
10. **Delle Monache, L.**, Hacker, J. P., Zhou, Y., Deng, X., and Stull, R. B., 2006. Probabilistic aspects of meteorological and ozone regional ensemble forecasts. *Journal of Geophysical Research*, 111, D24307, doi:10.1029/2005JD006917
11. Pagowski, M., Grell, G. A., Devenyi, D., Peckham, S. E., McKeen, S. A., Gong, W., **Delle Monache, L.**, McHenry, J. N., McQueen, J., and Lee, P., 2006. Application of dynamic linear regression to improve the skill of ensemble-based deterministic ozone forecasts. *Atmospheric Environment*, doi:10.1016/j.atmosenv.2006.02.006
12. **Delle Monache, L.**, Deng, X., Zhou, Y., and Stull, R. B., 2006. Ozone ensemble forecasts: 1. A new ensemble design. *Journal of Geophysical Research*, 111, D05307, doi:10.1029/2005JD006310

13. **Delle Monache, L.**, Nipen, T., Deng, X., Zhou, Y., and Stull, R. B., 2006. Ozone ensemble forecasts: 2. A Kalman filter predictor bias-correction. *Journal of Geophysical Research*, 111, D05308, doi:10.1029/2005JD006311
14. **Delle Monache, L.**, Perry, K. D., Cederwall, R. T., and Ogren, J. A., 2004. In situ aerosol profiles over the Southern Great Plains CART site. Part II: effects of mixing height on aerosol properties. *Journal of Geophysical Research*, 109, D06209, doi:10.1029/2003JD004024
15. **Delle Monache, L.**, Stull, R. B., 2003. An ensemble air-quality forecast over Western Europe during an Ozone episode. *Atmospheric Environment*, 37, 3469-3474
16. Campanelli, M., **Delle Monache, L.**, Malvestuto, V., and Olivieri, B., 2003. On the correlation between the depth of the boundary layer and the columnar aerosol size distribution. *Atmospheric Environment*, 37, 4483-4492

Peer Review Journals (submitted / in preparation)

1. Wyszogrodzki, A., Liu, Y., Jacobs, N., Childs, P., Roux, G., **Delle Monache, L.**, Zhang, Y., and Warner, T., 2011. Analysis of the surface temperature and wind bias of the NCAR-AirDat operational CONUS 4km RTFDFA forecasting system. Submitted to *Weather and Forecasting*
2. Zhang, Y., Liu, Y., Childs, P., Jacobs, N., Nipen, T., Warner, T., **Delle Monache, L.**, Roux, G., Wyszogrodzki, A., Cheng, W., Yu, W., and Sheu, R.-S., 2011. Evaluation of the impact of assimilating the TAMDAR data on WRF-based RTFDFA simulations and performance on predicting warm-season precipitation over the CONUS. Submitted to *Journal of Applied Meteorology and Climatology*
3. **Delle Monache, L.**, Eckel, T., Rife, D., and Nagarajan, B., 2011. Analog ensembles: a new paradigm for improving weather predictions. In preparation, *Monthly Weather Review*
4. Eckel, T., **Delle Monache, L.**, Rife, D., and Nagarajan, B., 2011. Analog ensembles for weather predictions: skill and economic value. In preparation, *Monthly Weather Review*
5. Draxl, C., **Delle Monache, L.**, Liu, Y., and Hahmann, A., 2011. Assimilating wind farm data with WRF-RTFDFA. In preparation, *Journal of Applied Meteorology and Climatology*
6. Draxl, C., **Delle Monache, L.**, Vanderberghe, F., Descombe, G., and Hahmann, A., 2011. On the assimilation of nacelle-height winds and yaw angles with EnKF for wind energy applications. In preparation, *Wind Energy*
7. Descombe, G., **Delle Monache, L.**, Vanderberghe, F., Kosovic, B., Simpson, M., Glascoe, L., and Bulaevskaya, V., 2011. Wind predictions over off-shore wind farms with WRF-DART. In preparation, *Wind Energy*
8. Williams, J., Maxwell, R., **Delle Monache, L.**, and Kollet, S., 2011. Ensemble data assimilation with fully coupled simulations to estimate the state of the subsurface – land surface – atmosphere system. In preparation, *Journal of Hydrometeorology*
9. Archer, C., **Delle Monache, L.**, and Rife, D., 2011. Global atlas of wind power density. In preparation, *Renewable Energy*

STUDENTS and POSTDOCS

1. Ida Maiello, Ph.D., University of L'Aquila-Cetemps, September 2011 – May 2012 (advisor)
2. Daniel Steinhoff, Postdoc, NCAR/RAL, July 2011 – present (advisor)
3. Raul Valenzuela, Ph.D., University of Colorado at Boulder, July 2011 – present (advisor)
4. John Williams, Ph.D., Colorado School of Mines, March 2011 – present (thesis committee)
5. Caroline Draxl, Ph.D., Risø DTU, March 2011 – present (thesis committee)
6. Thomas Nipen, Ph.D., University of British Columbia, May – July 2009, May 2010 (advisor)

GRANTS AND RESEARCH AWARDS (as PI or Co-PI only)

Note:

- LLNL employees are not eligible for NSF funding
- NCAR employees are not eligible for funding from NSF's Division of Atmospheric and Geospace Sciences

Period	Role	Title	Agency	Amount
2012 – 2014	PI	Investigating marine boundary layer parameterizations by combining observations with models via state estimation	Department of Energy	\$702,000 (award: 9/30/11)
2011 – 2012	Co-PI	Analog-based probabilistic predictions of the lower PBL	U.S. Army Test and Evaluation Command	\$250,000
2011 – 2012	Co-PI	Analog-based methods to improve the accuracy of dispersion predictions and estimate their uncertainty	Defense Threat Reduction Agency	\$230,000
2010 – 2012	Co-PI	The vector mosquito <i>Aedes Aegypti</i> at the margins: sensitivity of a coupled natural and human system to climate change	NSF's Dynamics of Coupled Natural and Human Systems Program	\$1,235,153
2009 – 2011	PI	Ensemble data assimilation for wind forecasts	Lawrence Livermore National Laboratory	\$132,620
2009 – 2010	PI	Evaluation of Interagency Modeling and Assessment Center improvements resulting from NEXRAD data assimilation	Lawrence Livermore National Laboratory	\$75,000

TEACHING EXPERIENCE

1995 – 1997	Math, physics, meteorology, air pollution and computer science (tutoring)
1998 – 2005	
2005, 2007	Lectures on air pollution, weather ensemble forecasting and model evaluation (UBC, SJSU)

AWARDS**Professional activities:**

2008	LLNL, Global Security Silver Award: "In recognition of exemplary technical accomplishments, which have resulted in an outstanding publication record, including nine peer-reviewed journal papers in the last two years"
2008	LLNL, CMELS Spot Award: "Outstanding achievement reviving and organizing the atmospheric science seminar series"

Sport activities:

2005	1 st place Field Hockey Canadian Championship
1991-1997	63 official international matches with the Italian Field Hockey National Team
1996	1 st place Field Hockey Italian Cup
1991	1 st place Field Hockey Italian Championship

MEMBERSHIP

American Meteorological Society, American Geophysical Union

PROFESSIONAL ACTIVITIES

Committees: Texas Environmental Research Consortium, Science Advisory Committee, (2011 – present)
La Mia Aria s.r.l., Scientific Committee (2010 – present)
American Meteorological Society Ad Hoc Committee on Generating and Communicating Forecast Uncertainty (2010 – 2011)

Peer Reviewer for:

Scientific Journals: Atmospheric Chemistry and Physics, Atmospheric Environment, Geophysical Research Letters, Journal of Applied Meteorology and Climatology, Journal of Geophysical Research, Monthly Weather Review, Science of the Total Environment

US Government Agency: Environmental Protection Agency (EPA)

Invited to: AMS - EPA Air Quality Model Evaluation Workshop (USA, August 2007)
Transregional Collaborative Research Centre, Annual Meeting (Germany, November 2008)
Scientific Committee, IEEE International Conference on Data Mining (Italy, December 2008)
Transregional Collaborative Research Centre (Germany, May 2011)
National Renewable Energy Laboratory (USA, August 2011)

CONFERENCES

1. Haupt, S., **Delle Monache, L.**, Hopson, T., Liu, Y., Myers, B., Weiner, G., and Mahoney, B., 2011. Quantifying uncertainty in wind power forecasts. *Energy and Meteorology Conference*, Gold Coast, Australia
2. Liu, Y., Cheng, W., Roux, G., **Delle Monache, L.**, Hopson, T., Liu, Y., Haupt, S., Warner, T., and Mahoney, W., 2011. Integration of high-resolution mesoscale-ensemble and very high-resolution deterministic NWP models for wind power prediction. *European Meteorological Society Annual Meeting*, Berlin, Germany
3. Williams, J., Maxwell, R., **Delle Monache, L.**, and Kollet, S., 2011. A fully-coupled ground water-land surface-atmospheric modeling system and ensemble data assimilation for wind energy predictions. *European Meteorological Society Annual Meeting*, Berlin, Germany
4. Rife, D., **Delle Monache, L.**, Eckel, T., and Nagarajan, B., 2011. Probabilistic weather predictions based on analogs. *European Meteorological Society Annual Meeting*, Berlin, Germany
5. **Delle Monache, L.**, Eckel, T., Rife, D., and Nagarajan, B., 2011. A new analog-based ensemble design for weather predictions. *European Meteorological Society Annual Meeting*, Berlin, Germany
6. Draxl, C., **Delle Monache, L.**, Liu, Y., Descombes, G., Vandenberghe, F., Cheng, W., Hahmann, A., Giebel, G., and Knierl, J., 2011. On the impact of the assimilation of nacelle winds and yaw angles with WRF-FDDA and WRF-DART for short-term wind energy predictions. *14th AMS Conference on mesoscale Processes*, Los Angeles, California
7. Draxl, C., **Delle Monache, L.**, Liu, Y., Descombes, G., Vandenberghe, F., Cheng, W., Hahmann, A., and Giebel, G., 2011. On the Impact of the Assimilation of Nacelle Winds and Yaw Angles With WRF-FDDA and WRF-DART for Short-Term Wind Energy Predictions. *WRF Users Workshop*, Boulder, Colorado
8. Liu, Y., **Delle Monache, L.**, Hopson, T., et al., 2011. Integration of high-resolution mesoscale-ensemble and very high-resolution deterministic NWP models for wind power prediction. *WINDPOWER 2011*, Anaheim, California
9. **Delle Monache, L.**, Nipen, T., Liu, Y., Roux, G., Stull, R., 2011: Kalman filter and analog schemes to post-process numerical weather predictions. *91st American Meteorological Society Annual Meeting*, Seattle, Washington
10. **Delle Monache, L.**, Fournier, A., Hopson, T., Liu, Y., Mahoney, B., Roux, G., Warner, T., 2011: Kalman filter, analog and wavelet postprocessing in the NCAR-Xcel operational wind-energy forecasting system. *91st American Meteorological Society Annual Meeting*, Seattle, Washington

11. Roux, G., Liu, Y., Pocerlich, M., Cheng, W., **Delle Monache, L.**, Fournier, A., Linden, S., Myers, W., 2011: Verification and analysis of hub-height wind forecasts from the NCAR-Xcel WRF-RTFDDA. *91st American Meteorological Society Annual Meeting*, Seattle, Washington
12. **Delle Monache, L.**, Descombes, G., Vandenberghe, F., Kosovic, B., Simpson, M., Bulaevskaya, V., Glascoe, L., 2011: Ensemble data assimilation for wind energy applications. *91st American Meteorological Society Annual Meeting*, Seattle, Washington
13. Liu, Y., Cheng, W., Roux, G., Liu, Y., **Delle Monache, L.**, Pocerlich, M., Kosovic, B., Hopson, T., Bourgeois, A., Wiener, G., Warner, T., Mahoney, B., Johnson, D., 2011: Wind energy forecasting with the NCAR RTFDDA and ensemble RTFDDA systems. *91st American Meteorological Society Annual Meeting*, Seattle, Washington
14. Roux, G., Liu, Y., Pocerlich, M., Linden, S., Cheng, W., **Delle Monache, L.**, Myers, B., Fournier, A., Hopson, T., and Parks, K., 2010. Post-processing and verification of analyses and forecasts of operational WRF RTFDDA systems for wind power applications. *WRF Users Workshop*, Boulder, Colorado
15. Pan, L., Liu, Y., Wu, W., Cheng, W., Descombes, G., Liu, H., Anderson, J., **Delle Monache, L.**, Roux, G., Jacobs, N., and Childs, P., 2010. Influences of different observations on forecasting a cold-air-damming event in the WRF-EnKF system. *WRF Users Workshop*, Boulder, Colorado
16. **Delle Monache, L.**, Kosovic, B., Simpson, M., Glascoe, L., Lundquist, J., Simpson, M., Obrecht, J., and Cleve, J., 2010. Ensemble-based data assimilation for wind energy predictions at fine scales. *The 5th International Symposium on Computational Wind Engineering*, Chapel Hill, North Carolina
17. **Delle Monache, L.**, Bieberbach G., Bieringer, P., Wyszogrodzki, A., Weil, J., Cabell, R., and Hurst, J., 2010. Virtual Chemical and Biological (CB) agent data set generation to support the evaluation of CB contamination avoidance systems. *The 5th International Symposium on Computational Wind Engineering*, Chapel Hill, North Carolina
18. **Delle Monache, L.**, Nipen, T., Fournier, A., Liu, Y., Mahoney, W., Roux, G., Stull, R., and Warner, T., 2010. Development of Kalman Filter and analogs schemes to improve numerical weather predictions. *Wind Energy R&D Workshop*, Boulder, Colorado
19. Liu, Y., **Delle Monache, L.** et al, 2010: WRF-RTFDDA and Ensemble-RTFDDA modeling systems for Xcel wind prediction. *Wind Energy R&D Workshop*, Boulder, Colorado
20. Roux, G., **Delle Monache, L.**, and Liu, Y., 2010. Post-Processing, Display and Bias Analysis of Xcel RTFDDA model outputs. *Wind Energy R&D Workshop*, Boulder, Colorado
21. **Delle Monache, L.**, Roux, G., Yubao, L., Warner, T., Nipen, T., Stull, R., Jacobs, N., and Childs, P., 2010. Kalman filter and analogs to improve numerical weather predictions. *The 4th Ensemble Kalman Filter Workshop*, Albany, New York
22. Metallo, Poli, A., De Fausti, F., **Delle Monache, L.**, Di Giovandomenico, P., Faricelli, C., Moreno, M., and Scifo, A., 2010. Air quality forecasting over Italy for the web service lamiaaria.it. *2010 National Air Quality Conferences: Air Quality Forecasting, Mapping, and Monitoring Communicating Air Quality*, Raleigh, North Carolina
23. Nipen, T., **Delle Monache, L.**, Roux, G., Liu, Y., Stull, R., and Warner, T., 2010. Kalman filtered analogs to improve numerical weather predictions. *20th Conference on Probability and Statistics in the Atmospheric Sciences, AMS Annual Meeting*, Atlanta, Georgia
24. **Delle Monache, L.**, Liu, Y., Nipen, T., Mahoney, W., Roux, G., Stull, R., and Warner, T., 2009. Ensemble-based data assimilation for wind energy predictions at fine scales. *5th WMO Symposium on Data Assimilation*, Melbourne, Australia
25. Metallo, C., Poli, A., De Fausti, F., **Delle Monache, L.**, Di Giovandomenico, P., Faricelli, C., Moreno, M., and Scifo, A., 2009. Air quality forecasting system for Italy. *CMAS Conference*, Chapel Hill, North Carolina
26. Liu, Y., Bourgeois, A., Roux, G., Hacker, J., Wu, W., Vandenberghe, F., **Delle Monache, L.**, Cheng, W., Liu, Y., Chen, F., Warner, T., and Swerdlin, S., 2009. Obs-nudging RTFDDA and its extension for ensemble, climate and les modeling. *WRF Users Workshop*, Boulder, Colorado
27. Roux, G., Liu, Y., **Delle Monache, L.**, Sheu, R.-S., and Warner, T., 2009. Verification of high-resolution WRF-RTFDDA surface forecasts over mountains and plains. *WRF Users Workshop*, Boulder, Colorado
28. Kosovic, B., **Delle Monache, L.**, Cameron-Smith, P., Bergmann, D., and Guilderson, T., 2009. Uncertainty quantification for fossil fuel CO2 emissions verification. *WRF Users Workshop*, Boulder, Colorado
29. Liu, Y., Warner, T., Wu, W., Roux, G., Cheng, W., Liu, Y., Chen, F., **Delle Monache, L.**, Mahoney, B., and Swerdlin, S., 2009. A versatile WRF and MM5-based weather analysis and forecasting system for supporting wind energy prediction. *23rd AMS Conference on Weather Analysis and Forecasting/19th AMS Conference on Numerical Weather Prediction*, Omaha, Nebraska

30. Bradley, M., **Delle Monache, L.**, Foster, K., Kosovic, B., and Lundquist, J., 2008. Advanced tools and services for the assessment and consequence management of nuclear and radiological terrorist events that involve atmospheric releases. *NATO Advance Research Workshop 2008*, Brussels, Belgium
31. **Delle Monache, L.**, 2008. Data assimilation and ensemble predictions for air quality and dispersion applications. Invited talk at the *Transregional Collaborative Research Centre, Annual Meeting 2008*, Bonn, Germany
32. **Delle Monache, L.**, Kosovic, B., Cameron-Smith, P., Bergmann, D., Grant, K., and Guilderson, T., 2008. Toward Regional Fossil Fuel CO₂ Emissions Verification Using WRF-CHEM. *American Geophysical Union Fall Meeting 2008*, San Francisco, California
33. Kosovic, B., **Delle Monache, L.**, Cameron-Smith, P., Bergmann, Grant, K., and Guilderson, T., 2008. Toward Regional Fossil Fuel CO₂ Emission Verification Using WRF-CHEM. *WRF Users Workshop*, Boulder, Colorado
34. Wilczak, J., Djalalova I., McKeen S., Grell, G., Peckham, S., McQueen, J., Lee, P., McHenry, J., Gong, W., Bouchet, V., Tang, Y., Pagowski, M., and **Delle Monache, L.**, 2008. Probabilistic ozone and PM_{2.5} forecast skill using an ensemble of air quality models including bias correction methods. Invited talk at *European Geophysical Union General Assembly 2008*, Vienna, Austria
35. **Delle Monache, L.**, Weil, J., Leach, M., Simpson, M., Leone, J., and Loosmore, G., 2007. A urban boundary layer and dispersion parameterization for the LLNL NARAC modeling system. Poster presentation at *American Geophysical Union Fall Meeting 2007*, San Francisco, California
36. **Delle Monache, L.**, Weil, J., Leach, M., Simpson, M., Leone, J., and Loosmore, G., 2007. A urban boundary layer and dispersion parameterization for the LLNL NARAC modeling system: tests with the Joint Urban 2003 Field Project data set. *7th AMS Symposium on the Urban Environment*, San Diego, California
37. **Delle Monache, L.**, Lundquist, J., Kosovic, B., Johannesson, G., Dyer, K., Aines, R., Chow, F., Belles, R., Hanley, W., Larsen, S., Loosmore, G., Mirin, A., Nitao, J., Sugiyama, G., and Vogt, P., 2007. Reconstruction of an accidental atmospheric release at continental scale via Bayesian inference and Markov Chain Monte Carlo (MCMC) sampling. *11th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling*, Fairfax, Virginia
38. **Delle Monache, L.**, Weil, J., Leach, M., Simpson, M., Leone, J., and Loosmore, G., 2007. A urban boundary layer and dispersion parameterization for the LLNL NARAC modeling system: Preliminary tests with the Joint Urban 2003 field project data set. *11th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling*, Fairfax, Virginia
39. **Delle Monache, L.**, Lundquist, J., Kosovic, B., and Mirocha, J., 2006. Event reconstruction for atmospheric releases at the continental scale: a case study: May 1998, Algeciras, Spain. *10th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling 2006*, Fairfax, Virginia
40. **Delle Monache, L.**, Deng, X., Zhou, Y., Shen, Y., Nipen, T., Modzelewski, H., Hicks, G., Cannon, T., Stull, R., and di Cenzo, C., 2005. Probabilistic and ensemble averaged ozone forecasts for the Lower Fraser Valley, British Columbia, Canada: The 11-15 August 2004 episode. *Air and Waste Management Association Pacific Northwest International Section 2005*, Semiahmoo Resort, Washington
41. **Delle Monache, L.**, Hacker, J., Nipen, T., Deng, X., Zhou, Y., Shen, Y., Modzelewski, H., Hicks, G., Cannon, T., Stull, R., and di Cenzo, C., 2005. Air quality ensemble forecasting: a new ensemble design and a Kalman filter correction. Poster presentation at *National Oceanic and Atmospheric Administration / Environmental Protection Agency Golden Jubilee*, Durham, NC
42. Shen, Y., Deng, X., Modzelewski, H., Hicks, G., Cannon, T., **Delle Monache, L.**, and Stull, R. B., 2005. Verification of parallel runs of MC2 at high resolution. *39th Canadian Meteorological and Oceanographic Society Congress 2005*, Vancouver, British Columbia
43. **Delle Monache, L.**, Deng, X., Zhou, Y., Shen, Y., Modzelewski, H., Hicks, G., Cannon, T., Stull, R. B., and di Cenzo, C., 2005. Ensemble air-quality forecasts over the Lower Fraser Valley, British Columbia. *39th Canadian Meteorological and Oceanographic Society Congress 2005*, Vancouver, British Columbia
44. **Delle Monache, L.**, Deng, X., Zhou, Y., Shen, Y., Nipen, T., Modzelewski, H., Hicks, G., Cannon, T., Stull, R. B., and di Cenzo, C., 2005. Air quality ensemble forecasting: an experimental ensemble design and a Kalman filter correction. *Atmospheric Sciences and Air Quality Conference 2005*, San Francisco, California
45. **Delle Monache, L.**, Deng, X., Zhou, Y., Modzelewski, H., Hicks, G., Cannon, T., Stull, R. B., and di Cenzo, C., 2004. Air quality ensemble forecast over the Lower Fraser Valley, British Columbia Canada. In *Proceedings of 27th NATO/CCMS Conference on Air Pollution Modeling 2004*, Banff, Alberta, 306-309
46. **Delle Monache, L.**, Deng, X., Zhou, Y., Modzelewski, H., Hicks, G., Cannon, T., Stull, R. B., and di Cenzo, C., 2004. Ensemble air quality forecasts over the Lower Fraser Valley, BC: June 2004 episode, preliminary results. *Western Canada Weather Workshop*, Vancouver, British Columbia

47. **Delle Monache, L.**, Deng, X., Zhou, Y., Modzelewski, H., Hicks, G., Cannon, T., Stull, R. B., and di Cenzo, C., 2004. Ensemble air quality forecasts over the Lower Fraser Valley, British Columbia: a summer 2004 case study. In *Proceedings of 13th AMS Conference on the Applications of Air Pollution Meteorology with the Air and Waste Management Association 2004*, Vancouver, British Columbia
48. **Delle Monache, L.**, di Cenzo, C., and Stull, R. B., 2004. An ensemble air quality forecast over the Lower Fraser Valley, British Columbia. *AQ 2004 Third Canadian Workshop on Air Quality*, Quebec City, Quebec
49. di Cenzo, C., Lord, E., and **Delle Monache, L.**, 2004. Using CMAQ/SMOKE/MC2 for real-time air quality forecasting over the Pacific Northwest. Poster presentation *EPA 2004 National Air Quality Conference*, Baltimore, Maryland
50. **Delle Monache, L.**, and Stull, R. B., 2004. Preliminary results of an ensemble air quality forecast system over the Lower Fraser Valley, British Columbia. In *Proceedings of AMS Annual Conference*, Seattle, Washington
51. **Delle Monache, L.**, and Stull, R. B., 2003. The UBC Model-3/CMAQ AQ forecast system. *NW-AIRQUEST Annual Meeting*, Portland, Oregon
52. **Delle Monache, L.**, and Stull, R. B., 2003. Ensemble air Quality model forecasts. *Western Canada Weather Workshop*, Vancouver, British Columbia
53. **Delle Monache, L.**, 2003. Aerosol property comparison within and above the ABL at the ARM Program SGP site. *LLNL Report UCRL-LR-146711 Thesis*, 153 pp
54. **Delle Monache, L.**, Perry, K. D., and Cederwall, R. T., 2002. Comparison of aerosol properties within and above the ABL at the ARM Program's SGP Site. In *Proceedings of AMS Conference on the Application of Air Pollution Meteorology 2002*, Norfolk, Virginia, 78-80
55. **Delle Monache, L.**, Perry, K.D., and Cederwall, R.T., 2002. Comparison of aerosol properties within and above the atmospheric boundary layer at the ARM SGP Site. In *Proceedings of the Twelfth ARM Science Team Meeting*, Ed. by D. Carrothers, U.S. Department of Energy, Richland, WA
56. Zanini, G., Bellasio, R., Bianconi, R., **Delle Monache, L.**, Lorenzini, R., Mosca, S., Monforti-Ferrario, F., Peverieri, S., and Vitali, L., 2002. PLPM (Photochemical Lagrangian Particle Model): Formulation and preliminary Validation. In *Proceedings of the Eight International Conference on Harmonisation within Atmospheric Modelling for Regulatory Purposes*, Sofia, Bulgaria
57. **Delle Monache, L.**, Rodriguez, D., and Cederwall, R., 2000: Clear sky identification using data from remote sensing systems at ARM's southern great plains site. *LLNL Report UCRL-ID-139553*, 13 pp
58. Zanini, G., Lorenzini, R., **Delle Monache, L.**, Mosca, S., Bellasio, R., Bianconi, R., and Peverieri, S., 2000. PLPM: a new photochemical lagrangian particle model. Basic ideas and preliminary results. In *Proceedings of the 24th NATO/CCMS Conference on Air Pollution Modeling 2000*, Boulder, Colorado, 465-474
59. **Delle Monache, L.**, 1998: Parallel computing for photochemical air pollution models. Poster presentation *TUG '98*, Edinburgh, UK
60. Lorenzini, R., **Delle Monache, L.**, and Cirillo, M., 1997. Porting the chemical module of CALGRID code on a SIMD massively parallel platform. In *Proceedings of HPC '97*, Santiago de Compostela, Spain