CURRICULUM VITAE

Zhiyong Meng

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Research Interests

Data assimilation and numerical weather prediction
Dynamic and mesoscale meteorology
Mesoscale predictability and ensemble forecast
Mesoscale Convective Systems
Tropical Cyclones.

Educational Background

Texas A&M University, Atmospheric Science, Ph.D., 2007
Chinese Academy of Meteorological Sciences, Meteorology, M.S., 1994
Beijing University, Atmospheric Science, B.S., 1991

Professional Experiences

2019.6 – Associate Dean, School of Physics, Peking University
2017.8 – Professor, Peking University
2014.10 – Associate Department Head, Department of Atmospheric and Oceanic Sciences, School of Physics, Peking University
2014.6 – 2017.7 Associate Professor, Peking University
2008.6 – 2014.5 Research Professor, Peking University
2009.1 – 2010.7 Visiting scholar, Pennsylvania State University
2007.6 – 2008.5 Postdoctoral fellow, Texas A&M University
2004. 6 Student visitor, National Center for Atmospheric Research
2003 – 2007 Graduate Research/Teaching Assistant, Texas A&M University
2001 – 2003 Associate professor, Chinese Academy of Meteorological Sciences
1995.1–3 Visiting scholar on numerical prediction of tropical cyclones at the Japan Meteorological Agency, Tokyo, Japan
1994 – 2001 Research assistant, Chinese Academy of Meteorological Sciences
1991 – 1994 Graduate research assistant, Chinese Academy of Meteorological Sciences

Selected Honors and Awards

2020 Fellow of the American Meteorological Society

2017 Distinguished Lecturer, Peking University, China

2015 The National Science Fund for Distinguished Young Scholars

2014 American Meteorological Society Editor's Award for Monthly Weather Review, USA.

2013 The National Award of Chinese Young Women in Science Fellowship, China.

2005 The First-class Prize of "Science and Technology Progress of Hubei Province Government" for "AREM Mesoscale Heavy Rainfall Numerical Prediction System", China.

1996 The First-class Prize of "Science and Technology Progress of China Meteorological Administration" for "Typhoon Scientific and Operational Experiments and Dynamic Studies", China.

Teaching

00407780 (graduate/undergraduate)：Numerical Weather Prediction, 2018 autumn, Instructor. PKU, China.

00407787 (graduate)：A guide to Research on Atmospheric and Oceanic Sciences, 2018 autumn, Instructor. PKU, China.

00407778 (graduate)：Mesoscale Dynamics, 2017 autumn, Instructor. PKU, China.

00407787 (graduate)：A guide to Research on Atmospheric and Oceanic Sciences, 2017 autumn, Instructor. PKU, China.

00407787 (graduate)：A guide to Research on Atmospheric and Oceanic Sciences, 2017 spring, Instructor. PKU, China.

00407787 (graduate)：A guide to Research on Atmospheric and Oceanic Sciences, 2016 autumn, Instructor. PKU, China.

00407780 (graduate/undergraduate)：Numerical Weather Prediction, 2016 autumn, Instructor. PKU, China.

00407778 (graduate)：Mesoscale Dynamics, 2015 autumn, Instructor. PKU, China.

00416810 (graduate)：Frontiers in Atmospheric Sciences, 2014 autumn, Organizer. PKU, China.

00407780 (graduate/undergraduate)：Numerical Weather Prediction, 2014 autumn, Instructor. PKU, China.

00405592 (graduate)：Severe weather and forecasting, 2014 spring, Instructor. PKU, China.

00416750 (graduate/undergraduate)：Numerical model and simulation, 2013 spring, Instructor. Peking University, China.

00416810 (graduate)：Frontiers in Atmospheric Sciences, 2012 spring, Organizer. PKU, China.

00405592 (graduate)：Severe weather and forecasting, 2012 spring, Instructor. PKU, China.

00416750 (graduate)：Numerical model and simulation, 2011 spring, Instructor. PKU, China.

00416750 (graduate)：Numerical model and simulation, 2009 spring, Instructor. PKU, China.

ATMO203 (undergraduate): Weather Forecasting Lab, 2007 spring, Instructor. TAMU, USA.

ATMO603 (graduate): Quantitative Methods in Atmospheric Sciences (Atmospheric Modeling and Data Analysis), 2005 fall, Teaching Assistant. TAMU, USA.

ATMO455 (undergraduate): Numerical Weather Prediction, 2004 fall, Teaching Assistant TAMU, USA.

Selected Professional Activities

Professional memberships:

American Meteorological Society, Chinese Meteorological Society; Asia Oceania Geosciences Society

Selected editorship

2018–present, Editor, *Advances in Atmospheric Sciences*

2017–present, Editor, *Science China* (*Earth Science)*

2013–present, Editor, *Frontiers in Atmospheric Science (SWISS)*

2012–present, Editor, *Meteorology*

2013–2016, Editor, *Atmospheric and Oceanic Science Letters*

2007–2014, 2018 Associate Editor, *Monthly Weather Review*

Selected advisory board member, expert panelist, and others

2016–present, Part-time Deputy Secretary General, Chinese Meteorological Society

2015–2016. Co-Chair, Expert Team on Severe Monsoon Weather of World Weather Research Project (WWRP) Working Group on Tropical Meteorological Research

2014–present, Member, World Weather Research Project (WWRP) Working Group on Predictability, Dynamics and Ensemble Forecasting (PDEF)

2014–present, Member, Scientific advisory board, Key Laboratory of Guangdong Regional Numerical Weather Prediction, China Meteorological Administration

2012–2018, Member, Mesoscale Processes Committee of American Meteorological Society

2011–2014, Member, Expert Team on Severe Monsoon Weather of World Weather Research Project (WWRP) Working Group on Tropical Meteorological Research

2011–present, Member, Numerical Weather Prediction Committee of Chinese Meteorological Society

2010–present, Member, Working Group of China Committee of THORPEX

2010–present, Member, Typhoon Committee of Chinese Meteorological Society

Selected organizer or co-organizer for the following conferences or workshops

2019, Co-chair, International Workshop/Summer School on Multiscale Convection, Beijing, China

2018, Co-chair, International Workshop/Summer School on Tropical Meteorology, Nanjing, China

2017, Co-Convener, Mountain Effects on Airflow, Precipitation, and Weather Systems Symposium, AOGS Annual Meeting, Singapore

2016 Chair, Extremely Heavy Rainfall Summer School, Beijing, China

2016, Co-Convener, Mesoscale Processes and Local Severe Storm Symposium, AOGS Annual Meeting, Beijing, China

2015, Co-chair, 14th CAS-TWAS-WMO Forum on Coupled Data Assimilation Symposium, Beijing

2015, Co-convener, Data Assimilation Summer School, 14th CAS-TWAS-WMO Forum, Beijing

2015, Co-Chair, 16th Conference on Mesoscale Processes of AMS, Boston, USA

2013, Co-Convener, Data Assimilation and Ensemble Forecasting for Weather and Climate Symposium, IAMAS/IUGG annual meeting, Davos, Swiss

2012, Chair, 2nd WMO Monsoon Heavy Rainfall Workshop, Kuala Lumpur, Malaysia

2011, Chair, A Tutorial of Ensemble Based Data Assimilation Forum, Chinese Meteorological Society Annual Meeting, Xiamen, China

2011, Co-Convener, Mesoscale Meteorology and Typhoon Symposium, AOGS Annual Meeting, Taipei, China

Reviewer of Journal of Atmospheric Sciences, Monthly Weather Review, Weather Forecasting, The Quarterly Journal of the Royal Meteorological Society, Advances in Atmospheric Sciences, etc.

Journal Publications (*: corresponding author, ***Italic***：Supervised graduate students)

64. 白兰强, **孟智勇***, SUEKI Kenta, 陈桂兴，周瑞琳，2020: 中国热带气旋龙卷的气候统计特征(2006~2018) , *中国科学*，50（5），619-634. https://doi.org/10.1360/SSTe-2020-0041.

63. Zhang, L., M. Fu*, H. Tian, Y. Ma, J-P. Chen, T-C. Tsai, **Z. Meng**, X. Yang, 2020: Anthropogenic Aerosols Significantly Reduce Mesoscale Convective System Occurrences and Precipitation over Southern China in April. (Supporting_Information), *Geophysical Research Letters*, accepted.

62. Wu*, N., X. Zhuang, J. Min, **Z. Meng**, 2020:, Practical and Intrinsic Predictability of a Warm-sector Torrential Rainfall Event in the South China Monsoon Region,*Journal of Geophysical Research: Atmospheres*, https://doi.org/10.1029/2019JD031313.

61. **孟智勇***, 张福青, 罗德海, 谈哲敏, 方娟, 孙建华, 沈学顺, 张云济, 汪曙光, 韩威, 赵坤, 朱磊, 胡永云, 薛惠文, 马亚平, 张丽娟, 聂绩, ***周瑞琳, 李娅, 刘泓君, 朱宇宁***. 2019: 新中国成立 70 年以来的中国大气科学研究：天气篇. *中国科学: 地球科学*, 49 (12), 1875-1918, https://doi.org/10.1360/SSTe-2019-0175

60. **Meng*** **Z**, Zhang F, Luo D, Tan Z, Fang J, Sun J, Shen X, Zhang Y, Wang S, Han W, Zhao K, Zhu L, Hu Y, Xue H, Ma Y, Zhang L, Nie J, ***Zhou R, Li S, Liu H, Zhu Y***. 2019： Review of Chinese atmospheric science research over the past 70 years: Synoptic meteorology.Science China Earth Sciences, 62 (12), 1946-1991, https://doi.org/10.1007/s11430-019-9534-6

59. Wu, N., L. Lin, X. Ding, Z. Wen*, **Z. Meng**, G. Chen, and J. Min, 2019: Contrasting the Frontal and Warm-sector Heavyrainfalls over South China during the Early-Summer Rainy Season. *Atmospheric Research*, 235. https://doi.org/10.1016/j.atmosres.2019.104693.

58. ***Zhang, M***., and **Z. Meng***, 2019: Warm-Sector Heavy Rainfall in Southern China and its WRF Simulation Evaluation: A Low-Level-Jet Perspective. Monthly Weather Review,147, 4461-4480.

57. He, J., F. Zhang*, X. Chen, X. Bao, D. Chen, H. M.Kim, H.W. Lai, R. Leung, X. Ma, **Z. Meng**, T. Ou, Z. Xiao, E. G. Yang, K. Yang, 2019: Development and Evaluation of an Ensemble-based Data Assimilation System for Regional Reanalysis over the Tibetan Plateau and Surrounding Regions. *Journal of Advances in Modeling Earth Systems*, 11, 2503–2522. https://doi.org/10.1029/2019MS001665.

56. ***Bai, L.***, **Z. Meng***, K. Sueki, and ***R. Zhou***, 2019: Climatology of Tropical Cyclone Tornadoes in China from 2006 to 2018.*Science China Earth Sciences*, 62. https://doi.org/10.1007/s11430-019-9391-1.

55. ***Zhang, M.***, **Z. Meng***, ***Y. Huang***, and D. Wang, 2019: The Mechanism and Predictability of an Elevated Convection Initiation Event in a Weak-Lifting Environment in Central Eastern China. *Monthly Weather Review*, 147, 1823-1841.

54. ***Yao, D***., **Z. Meng***, M. Xue, 2019: Genesis, Maintenance and Demise of a Simulated Tornado and the Evolution of its preceding Descending Reflectivity Core (DRC).*Atmosphere*, 10(5), 236; https://doi.org/10.3390/atmos10050236

53. ***Huang, Y.,*** **Z. Meng***, W. Li, ***L. Bai***， and X. Meng, 2019: General features of radar-observed boundary layer convergence lines and their associated convection over a sharp vegetation-contrast area. *Geophysical Research Letters*, in press.

52. **Meng*, *Z., X. Tang, J. Yue, L. Bai, and L. Huang***, 2019: Impact of EnKF surface and rawindsonde data assimilation on the simulation of the extremely heavy rainfall in Beijing on 21 July 2012. *Acta Scientiarum Naturalium Universitatis Pekinensis (in Chinese with English Abstract)*, in press.

51. ***Bai, L.,*** **Z. Meng***, ***Y. Huang, Y. Zhang***, S. Niu, and T. Su, 2019: Convection initiation resulting from the interaction between a PBL confluence line and gust fronts: A case study. *Journal of Geophysical Research: Atmospheres*, in press.

50. ***Zhang, M.,*** and **Z. Meng***, 2018: Impact of synoptic-scale factors on rainfall forecast in different stages of a persisitent heavy rainfall event in South China. *Journal of Geophysical Research: Atmospheres*, **123 (7)**, 3574–3593.

49. **Meng*, *Z., L. Bai , M. Zhang***, Z. Wu, Z. Li, M, Pu, Y. Zheng, X. Wang, D. Yao, M. Xue, K. Zhao, Z, Li, S. Peng, and L. Li, 2018: The deadliest tornado (EF4) in the past 40 years in China. *Weather and Forecasting*, **33**, 693–713.

48. Deng, X., H. Xue*, and **Z. Meng,** 2018: The effect of ice nuclei on a deep convective cloud in South China. *Atmospheric Research*, **206**, 1–12.

47. Luo*, Y., R. Zhang, Q. Wan, B. Wang, W.K. Wong, Z. Hu, B. J. Jou, Y. Lin, R.H. Johnson, C. Chang, Y. Zhu, X. Zhang, H. Wang, R. Xia, J. Ma, D. Zhang, M. Gao, Y. Zhang, X. Liu, Y. Chen, H. Huang, X. Bao, Z. Ruan, Z. Cui, **Z. Meng**, J. Sun, M. Wu, H. Wang, X. Peng, W. Qian, K. Zhao, and Y. Xiao, 2017:The southern China monsoon rainfall experiment (SCMREX). *Bull. Amer. Meteor. Soc.*, **98**, 999–1013.

46. Chen, L., **Z. Meng***, and C. Cong, 2017: An overview on the research of typhoon rainfall distribution. *Journal of Marine Meteorology.(in Chinese with English Abstract)*, **37(4)**,1–7.

45. ***Bai, L.,* Z. Meng*, *L. Huang***, L. Yan, Z. Li, X. Mai, *Y. Huang*, ***D. Yao***, and X. Wang, 2017: An integrated damage, visual, and radar analysis of the 2015 Foshan, Guangdong EF3 tornado in China produced by the landfalling Typhoon Mujigae (2015). *Bulletin of the American Meteorological Society*, **98**.2619–2640.

44. ***Zhu, L.,* Z. Meng***, F. Zhang, and P. Markowski, 2017: The influence of sea- and land-breeze circulations on the diurnal variability of precipitation over a tropical island (2015). *Atmospheric Chemistry and Physics*, **17**, 13213–13232.

43. ***Huang, Y.,* Z. Meng,** J. Li, W. Li*, ***L. Bai, M. Zhang***, and X. Wang, 2017: Distribution and variability of satellite-derived signals of isolated convection initiation over central Eastern China *Journal of Geophysical Research: Atmospheres*, **122**, 11357–11373.

42. Bao, X.,Y. Luo*, J. Sun, **Z. Meng,** and ***J. Yue***, 2017: Assimilating Doppler radar observations with an ensemble Kalman filter for convection-permitting prediction of convective development in a heavy rainfall event during the pre-summer rainy season of South China, *Science China Earth Sciences*, **60**, 1866–1885.

41. *Yu, H.*, H. Wang, **Z. Meng***, M. Mu, X. Huang, and X. Zhang, 2017: A WRF-based tool for forecast sensitivity to initial perturbation: the conditional non-linear optimal perturbations versus the first singular vector method and comparison to MM5, *Journal of Atmospheric and Oceanic Technology*, **34**, 187–206.

40. *Yue, J.,* Z. Meng*, C. Yu, and L. Cheng, 2017: Impact of coastal radar observability on the forecast of track and rainfall of Typhoon Morakot (2009) using a WRF-based EnKF data assimilation, *Advances in Atmospheric Sciences*, **34(1)**, 66–78.

39. *Yue, J.,* and Z. Meng*, 2017: Impact of assimilating Taiwan coastal radar radial velocity on the forecast of Typhoon Morakot (2009) in southeastern China using a WRF-based EnKF, *Science China Earth Sciences for publication*, 60(2), 315–327.

38. He, Z., Q. Zhang*, ***L. Bai***, and **Z. Meng**, 2016: Characteristics of mesoscale convective systems in central East China and their reliance on atmospheric circulation patterns, *International Journal of Climatology*, **12**.

37. Zheng*, Y., W. Zhu, D. Yao, **Z. Meng**, M. Xue, K. Zhao, Z. Wu, X. Wang, and Y. Zheng, 2016: Wind Speed Scales and Rating of the Intensity of the 23 June 2016 Tornado in Funing County, Jiangsu Province, *Meteorological Monthly*, **42**(11),1289–1303. (in Chinese with English Abstract)

36. ***Ai, Y.***, W. Li, **Z. Meng**, and J. Li*, 2016: Life cycle characteristics of MCSs in middle east China tracked by combining geostationary satellite and precipitation estimations, *Monthly Weather Review*, **144**, 2517–2530.

35. ***Zhang, Y.***, **Z. Meng**, P. Zhu, T. Tao, and G. Zhai*, 2016: Mesoscale modeling study of severe convection over complex terrain, *Advances in Atmospheric Sciences*, **33(11)**, 1259–1270.

34. ***Yu, H.,*** and **Z. Meng*,** 2016: Key synoptic-scale features influencing the high-impact heavy rainfall in Beijing, China on 21 July 2012, *Tellus A*, **68**,31045.

33. Zheng*, Y., F. Tian, **Z. Meng**, M. Xue, ***D. Yao***, ***L. Bai***, X. Zhou, X. Mao, and M. Wang, 2016: Survey and Multi-scale Characteristics of Wind Damage Caused by Convective Storms in the Surrounding Area of the Capsizing Accident of Cruise Ship " Dongfangzhixing", *Meteorological Monthly*, **42**(1), 1–13. (in Chinese with English Abstract)

32. **Meng*, Z.,** ***D. Yao, L. Bai***, Y. Zheng, M. Xue, X. Zhang, K. Zhao, F. Tian, and M. Wang, 2016:Wind estimation around the shipwreck of the "Oriental Star" based on field damage survey and radar observaions, *Science Bulletin*, **61(4)**, doi:10.1007/s11434-016-1005-2.

31. ***Zhang, Y.***, F. Zhang, D. Stensrud, and **Z. Meng***, 2016: Intrinsic predictability of the 20 may 2013 tornadic thunderstorm event in Oklahoma at storm scale, *Monthly Weather Review*, **144**, 1273–1298.

30. ***Zhu, L.***, Q. Wan, X. Shen, **Z. Meng***, F. Zhang, Y. Weng, Y. Gao, ***Y. Zhang*** and ***J. Yue***, 2016:Prediction and predictability of a high-impact western pacific landfalling typhoon Vicente (2012) through convection-permitting ensemble assimilation of Doppler radar velocity, *Monthly Weather Review*, **144**，21–43.

29. ***Zhang Y.***, F. Zhang, D. Stensrud, and **Z. Meng***, 2015: Predictability of the tornadic thunderstorm event in Oklahoma on 20 may 2013: Sensitivity of convection initiation and organization to small changes in synoptic timing and topographical forcing, *Monthly Weather Review*, **143**, 2973–2997.

28. Bei*, N., G. Li, **Z. Meng**, Y. Weng, M. Zavala and L. Molina, 2014: Impacts of using an ensemble Kalman filter on air quality simulations along the California-Mexico border region during Cal-Mex 2010 Field Campaign. *The Science of the total environment*, **499**, 141–153.

27. ***Zhang***, ***Y.***, **Z. Meng***, Y. Weng and F. Zhang, 2014: Predictability of tropical cyclone intensity evaluated through 5-year forecasts with a convection-permitting regional-scale Model in the Atlantic basin, *Weather and Forecasting*, **29**, 1003–1023.

26. **Meng***, **Z.** and ***D. Yao***, 2014: Damage survey, radar and environment analyses on the first-ever documented tornado in Beijing during the heavy rainfall event of 21 July 2012, *Weather and Forecasting*, **29**, 702–724

25. ***Huang***, ***L.*** and **Z**. **Meng***, 2014: Quality of the target area for metrics with different nonlinearity in a mesoscale convective system, *Monthly Weather Review*, **142**, 2379–2397.

24. **Meng* Z.**, ***D. Yan***, and ***Y. Zhang***, 2013: General features of squall lines in East China. *Monthly Weather Review*, **141**, 1629–1647.

23. ***Wu, D***., **Z. Meng*,** and ***D. Yan***, 2013: The predictability of a squall line in South China on 23 April 2007. *Advances in Atmospheric Sciences*, **30**, 485–502.

22. ***Li, Y.***, C. Zhang*, J. Zhong, and **Z. Meng**, 2013: Case study on observation sensitive region of heavy rainfall in Beijing area. *Climatic and Environmental Research,* **18(5)**, 651–661. (in Chinese with English Abstract)

21. ***Wu, D.***, and **Z. Meng***, 2013: On the movement and mesoscale surface structure of a squall line on 23 April 2007 in Guangdong. *Journal of Natural Science of Peking University*, **49**, 463–470. (in Chinese with English Abstract)

20. Meng* Z, F. Zhang, P. Markowski, ***D. Wu,*** and K. Zhao, **2012**: A modeling study on the development of a bowing structure and associated rear inflow within a squall line over South China. *J. Atmos. Sci.*, **69**, 1182–1207.

19. Meng*, Z., and ***Y. Zhang***, 2012: On the squall lines preceding landfalling tropical cyclones in China. *Monthly Weather Review*, **140**, 445–470.

18. Meng, Z., and F. Zhang*, 2010: Limited-area ensemble-based data assimilation. *Monthly Weather Review*, **139**, 2025–2045.

17. Gao, S., **Z. Meng***, F. Zhang, and L. F. Bosart, 2009: Observational analysis of heavy rainfall mechanisms associated with severe tropical storm Bilis (2006) after its landfall. *Monthly Weather Review*, **137**, 1881–1897.

16. Gao, S, **Meng Z***., G. Yang, 2009: Study on the predictability of the recurvature of typhoon Matsa (0509) in Bohai, *Meteorology Monthly*, **35(2)**, 8–14. (in Chinese with English Abstract)

15. Zhang*, F., Y. Weng, **Meng, Z.**, J. A. Sippel and C. H. Bishop, 2009: Cloud-resolving hurricane initialization and prediction through assimilation of Doppler Radar observations with an ensemble Kalman filter: Humberto (2007). *Monthly Weather Review,* **137**, 2105–2125.

14. **Meng, Z.**, and F. Zhang*, 2008: Test of an ensemble-Kalman filter for mesoscale and regional-scale data assimilation. Part IV: Comparison with 3DVar in a month-long experiment, *Monthly Weather Review*, **136**, 3671–3682.

13. **Meng, Z.,** and F. Zhang*, 2008: Tests of an ensemble Kalman filter for mesoscale and regional-scale data assimilation, Part III: Comparison with 3DVar in a real-data case study. *Monthly Weather Review.* **136**, 522–540.

12. **Meng, Z.**, and F. Zhang*, 2007: Tests of an ensemble Kalman filter for mesoscale and regional-scale data assimilation, Part II: Imperfect model experiments. *Monthly Weather Review.* **135**, 1403–1423.

11. Hawbliztel, D., F. Zhang*, **Z. Meng** and C. A. Davis, 2007: Probabilistic evaluation of the dynamics and predictability of mesoscale convective vortex event of 10–13 June 2003. *Monthly Weather Review*, **135**, 1544–1563.

10. Zhang*, F., **Z. Meng** and A. Aksoy, 2006: Test of an ensemble-Kalman filter for mesoscale and regional scale data assimilation. Part I: Perfect-model experiments. *Monthly Weather Review*, **134,** 722–736.

9. Zhang* Shengjun, Xu XiIangde, Wu Qingmei, and **Meng Z.**, 2004: Four dimensional data assimilation of wind profiler observations obtained from “China Landfalling Typhoon Experiment”, *Quarterly Journal of Applied Meteorology*, Vol. **15,** B12, 101–109. (in Chinese

with English Abstract)

8. Xu* Xiangde, Weng Yonghui, **Meng Z.**, Zhou Mingyu, 2002: A study on the mesoscale convection in a torrential rain event in Wuhan-Huangshi in July 1998, *Chinese J. Atmos, Sci.*, Vol.**26**, No.6, 845–856. (in Chinese with English Abstract)

7. **Meng* Z.**, Xu Xiangde, Chen Lianshou, 2002: Meso-scale characteristics of the interaction between TC Tim (9406) and mid-latitude circulation, *Acta Meteorologica Sinica*, Vol.**60**, No.1, 31–39. (in Chinese with English Abstract)

6. **Meng* Z.**, Chen Lianshou, Xu Xiangde, 2002: Recent progress on tropical cyclone research in China, *Advances in Atmospheric Sciences*, Vol.**19**, No.1, 103–110.

5. **Meng* Z.**, Xu Xiangde, Chen Lianshou, 2002: T_{BB}-nudging four dimensional data assimilation method and simulation experiment on "7.20" heavy rain process in Wuhan in 1998, *Chinese J. Atmos, Sci.*, Vol.**26**, No.5, 663–676. (in Chinese with English Abstract)

4. **Meng* Z.**, Xu Xiangde, Chen Lianshou, 2001: A kind of tangential wind profile for strong tropical cyclone and its contribution to abnormal tropical cyclone track simulation, *Chinese J. Atmos, Sci.*,Vol.**25**, No.2,193–199. (in Chinese with English Abstract)

3. Chen Lianshou, **Z. Meng***, 2001: An overview on tropical cyclone research progress in China during the past ten years, *Chinese J. Atmos. Sci.*, Vol. **25**, No.3, 420–432. (in Chinese with English Abstract)

2. **Meng* Z.**, Xu Xiangde, Chen Lianshou, 1998: Mechanism of the impact of induced cyclone system around Taiwan island topography on tropical cyclone unusual motion, *Chinese J. Atmos, Sci.*, Vol. **22**, No.1,79–92. (in Chinese with English Abstract)

1. **Meng* Z.**, Nagata Masashi, Chen Lianshou, 1996: A numerical study on the formation and development of island-induced cyclone and its impact on typhoon structure change and motion, *Acta Meteorologica Sinica*, Vol. **10**, No.4, 430–443.

论著章节

3. Meng*, **Z.**, 2017: Recent progress on squall lines in East China. *In：* C. P. Chang et al. (editors). *The Global Monsoon System: Research and Forecast, 3rd edition, World Scientific Series on Asia-Pacific Weather and Climate*, by World Scientific Publishing Co, pp. 201–213.

2. Meng*, **Z.**, F. Zhang, 2015: Ensemble-based data assimilation. *In: Gerald R. North (editor-in-chief), John Pyle and Fuqing Zhang (editors). Encyclopedia of Atmospheric Sciences, 2nd edition*, Vol 2, pp. 241–247.

1. Meng*, **Z**., 2009: Advice from an ESL (English as a Second Language) scientist. *Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker and Atmospheric Scientist.* Boston, MA: American Meteorological Society, 195.