个人简历

个人概况

姓　　名：张元春　　**性　　别**：女
民　　族：汉族　　**出生年月**：1987 年 1 月
工作单位和职称：中国科学院大气物理研究所 副研究员
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研究方向

- 中尺度气象学，主要从事中小尺度天气系统及其产生的极端和灾害性天气（包括短时强降水，雷暴大风等）研究。共发表论文 20 余篇。

教育背景

- 2008 年 9 月- 2013 年 6 月，中国科学院大气物理研究所，硕博连读研究生
- 2004 年 9 月- 2008 年 6 月，南京信息工程大学大气科学系，大气科学专业，本科

工作经历

- 2019.2 至今　　中国科学院大气物理研究所　　副研究员
- 2013.07-2019.01　中国科学院大气物理研究所　　助理研究员
- 2015.08.-2015.11　美国宾夕法尼亚州立大学气象系 访问学者
- 2012.07-2013.03　美国宾夕法尼亚州立大学气象系 访问学者

学术奖励

- 2023 年度中国科学院青年创新促进会会员

科研项目

- 国家自然科学基金，面上项目，暖季长江中游二级地形中尺度对流的初生机制，2020.1-2023.12，63 万，项目负责人
- 国家重点研发计划，极端与转折性天气下风电/光伏功率爬坡及供电能力不足风险预测技术，2022.11-2025.12，155 万，任务负责人
- 国家自然科学基金， 联合基金项目，长江中游地区复杂下垫面对强风暴触发与演变过

程的影响及机理，2022.1-2025.12，265 万，项目骨干

- ◆ 国家重点研发计划，西南山地突发性暴雨形成机理及预报理论方法研究，2018.12-2021.12，82 万元，课题骨干
- ◆ 国家自然科学基金，青年科学基金项目，夏季我国二级地形触发对流东移影响下游强降水对流系统的机理，2016.1- 2018.12，24.5 万元，项目负责人

论文发表

Zhang, Y. C.*, Lu R., Sun J. H., et al., 2023, Organizational Modes and Environmental Conditions ofthe Severe Convective Weathers Produced by the Mesoscale Convective Systems in South China [J]. ***Journal of Tropical Meteorology***, 29(1): 26-38.

Zhang, Y. C., Sun J. H., Yang R. Y. and et al., 2022: Initiation and evolution of long-lived eastward propagating mesoscale convective systems over the second-step terrain along Yangtze-Huaihe River Valley. ***Adv. Atmos.Sci.***, 39(5), 763−781.

Fu, S.-M., **Zhang, Y.C.** Wang, H.-J., and et al., 2022, On the evolution of a long-lived mesoscale convective vortex that acted as a crucial condition for the extremely strong hourly precipitation in Zhengzhou. ***J. Geophys. Res. Atmos.***, 127, e2021JD036233.

Yang R. Y., **Zhang Y. C.***, Sun J. H. and Li J, 2020: The comparison of statistical features and synoptic circulations between the eastward-propagating and quasi-stationary MCSs during the warm season around the second-step terrain along the middle reaches of the Yangtze River, ***SCIENCE CHINA Earth Sciences***, 63:1209-1222.

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Zhang, Y. C. ; Zhang F. Q*; Davis C. A.; Sun J. H., 2018: Diurnal evolution and structure of long-lived mesoscale convective vortices along the Mei-yu front over the East China Plains, J. Atmos. Sci., 75(3): 1005-1025.

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Zhang Y. C., J. H. Sun, 2017: Comparison of the diurnal variations of precipitation east of the Tibetan Plateau among sub-periods of Meiyu season, ***Meteorol. Atmos. Phys.***, DOI 10.1007/s00703-016-0484-7.

Zhang Y. C., J. H. Sun and S. M. Fu, 2017: Main Energy Paths and Energy Cascade Processes of the Two Types of Persistent Heavy Rainfall Events over the Yangtze River–Huaihe River Basin, ***Adv. Atmos. Sci.***,34(2),DOI: 10.1007/s00376-016-6117-8.

Zhang Y. C., F. Zhang*, and J. H. Sun, 2014: Comparison of the diurnal variations of warm-season precipitation for East Asia versus North America downstream of the Tibetan Plateau versus the Rocky Mountains. ***Atmos. Chem. Phys***., 14, 10741-10759, doi:10.5194/acp-14-10741-2014.

Zhang Y. C., J. H. Sun *, and S. M. Fu, 2014: Impacts of Diurnal Variation of Mountain-plain Solenoid Circulations on Precipitation and Vortices East of the Tibetan Plateau during the Mei-yu Season. ***Adv. Atmos. Sci.***, 31(1), 139-153.

张元春，孙建华，傅慎明等，2023，“21.7”河南特大暴雨的中尺度系统活动特征，**大气科学** doi: 10.3878/j.issn.1006-9895.2302.22135

张元春，孙建华，傅慎明., 2012: 冬季一次引发华北暴雪的低涡涡度分析，***高原气象***，31（2），387-399.

张元春，孙建华，徐广阔等，2012：江淮流域两次中尺度对流涡旋（MCV）的结构特征研究，***气候与环境研究***，18(3): 271-287.

Sun, J., Fu, S., Wang, H., **Zhang, Y.**, and et al, 2022: Primary characteristics of theextreme heavy rainfall event over Henan in July2021. Atmos. Sci. Lett., e1131

Meng Y. N.; Sun J. H.; **Zhang Y. C.** and et al., 2021: A 10-Year Climatology of Mesoscale Convective Systems and Their Synoptic Circulations in the Southwest Mountain Area of China, J. Hydrol. 22, 23-31.

Fu, S.-M., H.-J. Wang, J.-H. Sun, and **Y.-C. Zhang**, 2016: Energy budgets on the interactions between the mean and eddy flows during a persistent heavy rainfall event over the Yangtze River Valley in summer 2010. ***J. Meteor. Res.***, doi: 10.1007/s13351- 016-5121-3.

Fu, S.-M., J.-H. Sun, J. Ling, H.-J. Wang, and **Y.-C. Zhang**, 2016: Scale interactions in sustaining persistent torrential rainfall events during the Mei-yu season, ***J. Geophys. Res. Atmos.***, 121, doi. 10.1002/2016JD025446.

Fu, S.-M., W.-L. Li, J.-H. Sun, J.-P., Zhang, and **Y.-C. Zhang**, 2014: Universal evolution mechanisms and energy conversion characteristics of long-lived mesoscale vortices over the Sichuan Basin. ***Atmos. Sci. Lett.*** DOI: 10.1002/asl2.533.

Zhang B, X.-J. Tian, J.-H. Sun, F. Chen, **Y.-C. Zhang**, L.-F. Zhang, S.-M. Fu, 2015: PODEn4DVar-based radar data assimilation scheme: formulation and preliminary results from real-data experiments with advanced research WRF (ARW), ***Tellus A*** , 67,26045.

李娟，孙建华，**张元春**，沈新勇, 2016：四川盆地西部与东部持续性暴雨过程的对比分析.***高原气象***, 35(1): 64-76