



English version

## **Special Issue on Advanced Applications of Meteorological Satellite Observations in Ecological Remote Sensing**

### **Call for Papers**

In past decades, the satellite observations have been widely used for environmental monitoring. In 2018, CMA national ecological remote sensing annual report first time claims that the national vegetation coverage increases 3.7%/year during 2000 to 2017. Meanwhile, the aerosol optical depth and other pollutants declines by 19.3% with respect to the mean of 16 years from 2003 to 2018. On 2/16/2019, NASA also reported the world is getting greener and thanks the tree planning and agriculture in China and India. In the past, there is skepticism that earth greening from satellite observations may be either a result of degradation of satellite instrument performance or stitching of satellite data from a series of instruments. This special issue will present the state-of-the art remote sensing algorithms and satellite products used for the national ecological monitoring. The scientists who are contributing to this special issue are the lead experts in satellite instrument calibration, algorithm developments and product applications.

The special issue will lay a solid foundation of utilizing the Chinese meteorological satellites for the national ecological remote sensing and environmental monitoring. Some of studies will also discuss the Chinese ecological variability and its connections with weather and climate changes. Papers for this special issue are solicited for, although not limited to, the following topics:

1. Remote sensing fundamentals of land and ocean products from satellites
2. Atmospheric air quality products from satellites
3. Applications of satellite derived products for monitoring of ecological environment
4. Impacts of meteorological conditions and climate variability on ecology

Contributions from authors in and out of China are warmly welcome and encouraged. In support of the publication of this special issue, publication charges of innovative, well-written papers will be waived, pending on the scores and comments of the

handling Editor/reviewers and the Responsible Editors Team of this special issue; and three best papers will be awarded with certificates and cash prizes. Contributions from both Chinese and overseas authors are well encouraged.

**Responsible Lead Editors for the Special Issue:**



**Fuzhong, Weng**, Chinese Academy of Meteorological Sciences, [Fuzhong.weng@outlook.com](mailto:Fuzhong.weng@outlook.com)

Dr. Fuzhong Weng graduated from the Department of Atmospheric Sciences (CSU) of Colorado State University in 1992, Fellow of the American Meteorological Society, Professor and Director of the Joint Research Center for Satellite Research and Applications of the Chinese Academy of Meteorological Sciences. During his tenure at the National Oceanic and Atmospheric Administration (NOAA) 1992-2018, he served as Director of the US Department of Satellite Meteorology and Climate, Chief Scientist, General Radiation Transfer Model (CRTM), Chairman of the United States Joint Polar Satellite System (JPSS) instrument. He has won several US national awards such as the 2000 NOAA David Johnson Award, the 2005 US Department of Commerce Gold Award, and the NOAA First Prize. He led the development of the US NOAA/NASA/DoD Community Radiative Transfer Model (CRTM), which is widely used in satellite data assimilation, instrument calibration and remote sensing applications. His achievements in CRTM won the 2009 National Oceanic and Atmospheric Administration's Science and Technology Award. He has published more than 297 papers in international journals, 9 book chapters and special issues, and a monograph (Weng, F., 2017: Passive microwave remote sensing of the earth for meteorological applications, 420pp, Wiley Series in Atmospheric Physics and Remote Sensing, Wiley). He is the co-chief editor of the Chinese Journal of Meteorological Research.



**Jun Yang**, National Satellite Meteorological Center, [junyang@cma.gov.cn](mailto:junyang@cma.gov.cn)

Jun Yang is the Director-in-general of the National Satellite Meteorological Center, member of the China Aerospace Society, member of the Chinese Meteorological Society, chair of the

Chinese Satellite Meteorology Committee, and co-chair of the satellite expert group of the Basic Systems Committee of the World Meteorological Organization. He has served as the deputy commander and chief commander of the ground application system engineering of Fengyun-1, Fengyu-2 and Fengyun-3 of China, and was selected as a national talent project by the State Council. He has won one first prize, one second prize, 8 provincial and ministerial awards and 8 honors. He has presided over several major projects such as 973, 863, meteorological specialized science projects. In recent years, he has published more than 30 papers in SCI/EI/CSCD and published 3 monographs. He organized the weather demonstration of the meteorological satellite ground application system, project implementation and business operation, and solved a series of technical problems in data acquisition, data processing, product generation, calibration and validation of satellite products. His work has led to the operationalization and quantitative application of meteorological satellites and promoted the global exchange and sharing of meteorological satellite data.



**Shihao Tang**, National Satellite Meteorological Center, tangsh@cma.gov.cn

Shihao Tang, professor and director of CRAS(Center of Remote Sensing Applications&Services, National Satellite Meteorological Center, Chinese Meteorological Administration. His research interests focus on the algorithm developments of Chinese new-generation meteorological satellite products, the application of satellite data in ecological and environmental monitoring, and the design and implementation of satellite ground application system. He has successively served as chief designer of Application Demonstration System and Product Generation System of FY-3 series satellites, and is awarded the title of "National Excellent Young Meteorological Scientists" and "Young Meteorological Talents" by CMA, respectively.



**Xiuzhen Han**, National Satellite Meteorological Center, hanxz@cma.gov.cn

Dr. Xiuzhen Han is the chief engineer of China Fengyun-3 ground application system and also the chief scientist of meteorological service in China Meteorological Administration. The main research directions are satellite ecological remote sensing of surface parameters and products

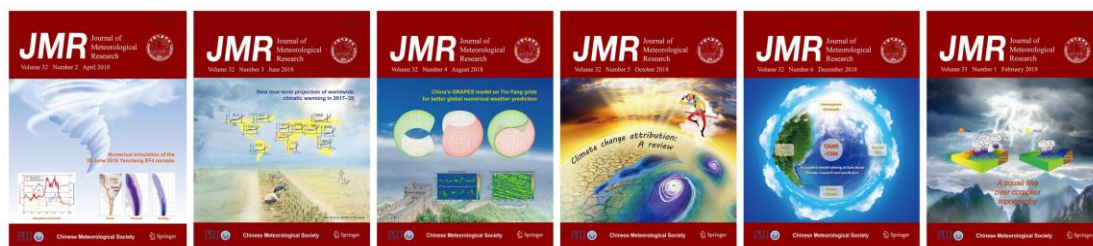


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## 附中文稿



# Journal of Meteorological Research

## 专刊征文启事

### 卫星生态遥感与应用

## Advanced Applications of Meteorological Satellite Observations in Ecological Remote Sensing

近十年，卫星观测已广泛用于生态环境监测。2018年生态遥感年报首次提出2000年至2017年全国植被覆盖率增加3.7%。同时，全国及重点区域气溶胶光学厚度相对于16年的平均值下降了19.3%。2018年2月12日，美国航天局推特报告指出，“世界变得比20年前更绿了”，“来自‘NASA地球’的卫星资料显示，是中国和印度的人类活动主导了地球变绿！”。过去，人们怀疑从卫星观测得到的地球变绿可能与卫星仪器性能衰变或一系列卫星数据

衔接不良造成的结果。本期专刊将介绍用于国家生态监测的最先进的卫星遥感反演算法和产品应用。为这一专刊投稿的作者多是来自卫星仪器定标，产品算法反演和应用的研究业务一线专家和骨干。该专刊将为气象卫星生态遥感与环境监测奠定坚实的基础，并将推动气象卫星在国家生态文明建设中的应用，部分文章还将深入研究中国生态变化与天气和气候变化的关系。

**征文主要面向但不限于以下研究方向：**

1. 海洋和陆地下垫面卫星遥感产品原理、
2. 卫星反演的空气质量产品、
3. 卫星反演产品在生态环境监测中的应用
4. 气象条件和气候变化对生态的影响。

本专刊将根据编辑/审稿人对稿件质量的评分和评审意见，对有创新、高质量的优秀论文减免版面费用，并将评选出三篇最佳论文授予奖励证书和奖金。欢迎海内外研究人员踊跃投稿。

**本专刊主要责任编辑：**



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翁富忠博士，首席科学家，教授/博导。1992年毕业于美国科罗拉多州立大学大气科学系（CSU）获博士学位。美国气象学会会士，卫星研究与应用联合中心主任。1992至2018年在美国国家海洋与大气管理局（NOAA）工作，期间曾任美国卫星气象和气候处主任，通用辐射传输模式（CRTM）首席科学家。曾担任美国联合极地卫星系统（JPSS）仪器主席。先后荣获如2000届NOAA戴维约翰逊奖，2005年度美国商务部金奖，NOAA一等奖。领导开发的美国NOAA/NASA/DoD通用辐射传输模式（Community Radiative Transfer Model, CRTM），被世界上广泛应用于卫星资料同化，仪器定标和遥感应用。为表彰其在CRTM中做出的贡献，2009年被授予NOAA科学技术奖。在国际期刊发表论文超过297篇、编写9部书籍章节、并著作一部专著（Weng, F., 2017: Passive microwave remote sensing of the earth for meteorological applications, 420pp, Wiley Series in Atmospheric Physics and Remote Sensing, Wiley）。目前其担任《气象学报》联合主编。



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国家卫星气象中心主任，研究员。中国宇航学会常务理事，中国气象学会常务理事、卫星气象学委员会主任委员；世界气象组织基本系统委员会卫星专家组联合主席。历任我国风云一号、风云二号、风云三号气象卫星地面应用系统工程副总指挥、总指挥，入选国家百千万人才工程，获国务院政府特殊津贴。曾获得国家科技进步一等奖1项、二等奖1项，省部级奖励及荣誉8项。主持完成多个973、863、气象行业专项、科技支撑等重大项目，近年在SCI/EI/CSCD刊物发表论文30余篇，出版专著3部。组织风云榜气象卫星地面应用系统立项论证、工程实施和业务运行，领导风云气象卫星数据获取、数据处理、产品生成、定标和真实性检验等一系列技术问题，实现了气象卫星的业务化，实现了气象卫星的业务化、量化应用，推动实现气象卫星数据全球交换和共享。



**唐世浩**， 国家卫星气象中心， [tangsh@cma.gov.cn](mailto:tangsh@cma.gov.cn)

唐世浩博士，中国气象局国家卫星气象中心遥感应用与服务中心主任，研究员。研究方向集中在中国新一代气象卫星产品的算法开发、卫星数据在生态和环境监测中的应用以及卫星地面应用系统的设计和实现。曾任FY-3系列卫星应用示范系统和产品生成系统主任设计师，被中国气象局授予“全国优秀青年气象科学家”和“青年气象人才”称号。



**韩秀珍**， 国家卫星气象中心， [hanxz@cma.gov.cn](mailto:hanxz@cma.gov.cn)

韩秀珍：中国气象局气象服务首席气象服务专家，国家卫星气象中心正研级高工/硕导，

中国风云三号气象卫星地面应用系统主任设计师。主要研究方向为生态遥感参数定量反演和应用、长时间序列卫星气候数据集研究及风云气象卫星地面应用系统 MAS 系统建设。主持完成国家自然科学基金等省部级项目 20 余项；已出版专著 2 部，发表论文 40 余篇。取得 6 项软著。曾获省部级一等奖和三等奖，获“中国气象局重大气象服务先进个人”等称号。首创建风云卫星监测分析与遥感应用系统 (SMART) 并在全国气象行业推广业务化应用；创建中国内陆湖泊蓝藻水华、地表温度、城市热岛监测评估算法模型，监测标准和业务系统；研发了风云三号 D 星业务化真彩色图像算法及业务化。主编完成 2017、2018 年《全国生态遥感年报》，并在全国气象部门发布。

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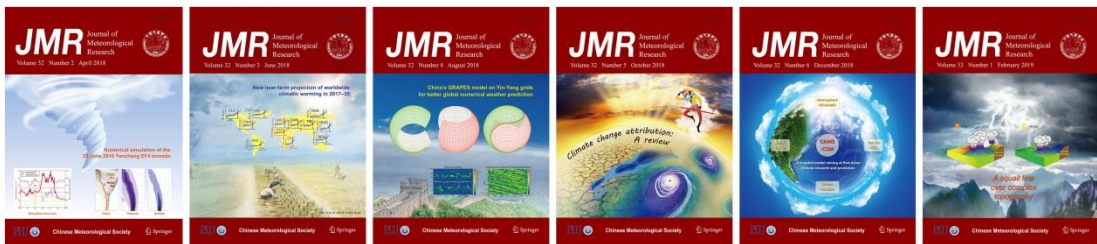
《气象学报(英文版)》Journal of Meteorological Research (JMR), 原名 Acta Meteorologica Sinica, 由中国气象学会和施普林格国际合作出版。JMR 旨在促 进科学交流和技术创新，加强中外气象学者的思想交流。期刊刊载范围包括气象 科学的各个领域，涉及观测、模拟、理论研究及业务应用（天气预报/气候预测） 等方面的科学问题，以及地学和环境科学领域的相关主题。

JMR 正在扩展栏目，除学术论文外，还设有项目亮点、会议报告、及有关气象研 究和业务进展的科学综述和讨论等。

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