



中国科学院大气物理研究所

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东亚区域气候-环境重点实验室



# 全球变化区域研究创新论坛

## 学术报告

报告题目: **Observations and Modeling Across  
Scales: Past development and future  
challenges**

报告人: **Prof. Eric Wood**

单 位: **Department of Civil and Environmental  
Engineering, Princeton University**

时 间: **2018年6月11日上午 10:00~11:00**

地 点: **大气所科研楼 101 会议室**

**欢迎大家踊跃参加并讨论!**

地址: 中国科学院大气物理研究所邮政信箱: 北京 9804 信箱邮编: 100029

Address: Institute of Atmospheric Physics, Chinese Academy of Sciences, P. O. BOX 9804,  
Beijing 100029, China

**Abstract.** In 1991, the National Research Council published an impactful study entitled “Opportunities in the Hydrologic Sciences”. Its impact stemmed in part by having the community think in new ways about hydrology as more strongly integrated with earth and climate sciences, and new paradigms for hydrological research and hydrological educations. Central to the study were a number of critical and emerging areas – among others it included diagnostic study of the global water budget, land-atmospheric coupling, characterization of spatial variability and scaling in hydrological processes. But in last 35 years, many others areas emerged that were not seen as critical – development of distributed SVAT-type land surface models, the emergence of remote sensing as a key observational resource, data assimilation in hydrology, developments in information and computer technology, climate services (to name a few).

This seminar will address these past developments to provide the perspective for looking at critical future challenges as they relate to

- (i) land surface modeling, and in particular to global modeling at scales of  $O(100)$  m,
- (ii) challenges in developing and using global water and energy cycle data sets, and
- (iii) the emerging new age of water and climate information.

**Bio:** Dr. Eric Wood is the Susan Dod Brown Professor at Princeton University. He has been elected to the U.S. National Academy of Engineering for his principal accomplishments in the development of land surface models and the use of remote sensing for hydrological modeling and prediction. He received the American Geophysical Union's (AGU) Robert E. Horton Medal for synergistic integration of distributed observations and predictions across scales leading to breakthroughs in global hydrology.

In addition, Prof. Eric Wood received American Meteorological Society's (AMS) Jule G. Charney Award, European Geosciences Union's (EGU) Alfred Wegener Medal, and NASA Achievement Award. He is a Fellow of AGU, AMS and Royal Society of Canada, and a Foreign Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE). He was the President of AGU Hydrology Section, member of AGU and AMS Council, co-chair of WCRP LandFlux, chair of GEWEX Hydrological Application Project, co-chair of NOAA/CPO Drought Task Force. He has published over 300 peer-reviewed papers, in the areas of hydroclimatology with an emphasis on land atmospheric interactions, terrestrial remote sensing, and seasonal hydrologic forecasts.

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