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**18th CTWF International Symposium on
Aerosol and Climate Change: Observations, Modeling & Interactions**

Program

July 15-17, 2019

**Beijing Friendship Hotel,
Beijing, China**

Organized by

**CAS-TWAS Center of Excellence for Climate and Environment Sciences
Institute of Atmospheric Physics, Chinese Academy of Sciences**

Sponsorship

Chinese Academy of Sciences

The World Academy of Sciences for the advancement of science in developing countries

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About CTWF

In order to facilitate the study and solution of important scientific problems in climate modeling and prediction, a regular international forum "CAS-TWAS-WMO Forum" (CTWF) for Physico-Mathematical Problems Related to Climate Modeling and Prediction was jointly proposed and founded by the Chinese Academy of Sciences (CAS), the World Academy of Sciences (TWAS), for the advancement of science in developing countries and the World Meteorological Organization (WMO) in 2000. The aim of CTWF is to bring together high level experienced mathematicians, physicists, atmospheric and oceanic scientists to exchange ideas, discuss scientific problems in depth and develop suitable solving methods by joint efforts. The co-chairs of CTWF will invite international experts to attend the annual symposium. The symposium will consist of invited lectures followed by plenary discussions. There will also be sessions with contributed papers or poster presentations if necessary.

In 2000, CAS-TWAS-WMO Forum for Physico-Mathematical Problems Related to Climate Modeling and Prediction has been founded jointly by Chinese Academy of Sciences (CAS), the World Academy of Sciences (TWAS), for the advancement of science in developing countries and World Meteorological Organization (WMO). The CAS-TWAS-WMO Forum will not only strengthen the relationship between CAS, TWAS, and WMO, to the benefit of developing countries, but also make its valuable contributions to science. A symposium for different topics regarding CTWF will be held every year.

CAS-TWAS Center of Excellence for Climate and Environment Sciences

The CAS-TWAS Center of Excellence for Climate and Environment Sciences (ICES) is honored to host the 18th CTWF International Symposium on Aerosol and Climate Change in July 2019. ICES was founded in 1991 as one of the network centers of excellence of TWAS, and was selected as the representative center of China to join the network of Centre of Excellence of COMSATS (Commission on Science and Technology for Sustainable Development in the South) in 1995. Besides, ICES also holds the secretariat of CAS-TWAS-WMO Forum (CTWF) on Climate Science, and has organized 14 international symposiums and 2 training workshops since 2000.

ICES focuses on the key scientific problems in global climate and environmental changes. The main research fields includes the development of Dynamical Earth System Model and numerical simulation, meteorological and environmental forecast and related disaster assessment theory and technique, data assimilation theory and methodology, and earth system theory and natural cybernetics.

As the CAS-TWAS center of excellence, ICES is devoted to establishing the cooperative and innovation research center of CAS and TWAS in the area of climate and environment sciences, and provide services to the developing countries with scientific support and advisory, capacity building, etc.

Currently, there are more than 50 research scientists in ICES, including 14 professors, one Academician of CAS and member of TWAS. Besides, ICES also has about 50 postdocs and graduate students, including PhD students and Postdoc from developing countries.

Website: <http://www.castwas-ices.ac.cn/>

Meeting Information

Meeting Venue:

Conference Room 5, 2nd Floor, Friendship Palace

Beijing Friendship Hotel, Beijing

Front Desk: 86-10-68498888

Webpage: <http://www.bjfriendshiphotel.com/en>

Registration

- July 14, 2019 14:00-18:00 at lobby of Building 2
- July 15, 2019 08:00-09:00 at Meeting Room 5

Meeting Time:

July 15, 2019 09:00-12:00 14:00-18:00

July 16, 2019 09:00-12:00 14:00-18:00

July 17, 2019 09:00-12:00

Meals:

- Breakfast (7:00-9:00) will be served at the Juhe Restaurant , Friendship Palace on the 1st Floor of Friendship Palace.
- Lunch (12:00-13:30) and Dinner (18:00-19:30) will be served at The Coffee Shop, Friendship Palace on the 1st Floor of Friendship Palace.
- Lunch and dinner coupons will be provided by the LOC to all formal participants.

Coffee Break:

Coffee, tea and water will be available at the scheduled breaks (twice each day).

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Sunday, July 14, 2019	
14:00 – 18:00	Registration
18:00 – 19:30	Dinner
Monday, July 15, 2019	
08:00 - 09:00	Registration
Session 0: Opening Ceremony 09:00 - 09:30 Chair: Zhaohui Lin	Welcome address <div style="text-align: right;"><i>Zhenyu Wang</i> <i>Deputy Director, BIC/CAS, China</i></div>
	Welcome address <div style="text-align: right;"><i>Jiang Zhu</i> <i>Director General, IAP/CAS, China</i></div>
	Welcome address <div style="text-align: right;"><i>Xiaohong Liu</i> <i>UW&IAP/CAS, USA</i></div>
Session I: Aerosol-Climate Interactions 09:30 - 10:20 Chair: Zhaohui Lin	<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">09:30-09:55 (Keynote)</div> <div style="width: 85%;"> Climate impact of anthropogenic aerosols on large-scale cirrus clouds <div style="text-align: right;"><i>Joyce Penner</i> <i>Univ. of Michigan, USA</i></div> </div> </div>
	<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">09:55-10:20 (Keynote)</div> <div style="width: 85%;"> Impact of light-absorbing aerosols on sub-seasonal-to-seasonal (S2S) variability of the Asian summer monsoon: inference from simulations using the Model for Prediction <div style="text-align: right;"><i>William Lau</i> <i>Univ. of Maryland, USA</i></div> </div> </div>
10:20 - 10:50	Coffee Break & Group Photo

Session I: Aerosol-Climate Interactions (cont.) 10:50 - 12:15 Chair: V. Ramaswamy	10:50-11:10 (Invited)	Amplified quasi-biennial variability in regional wildfire through fire-precipitation interactions <i>Yun Qian</i> <i>PNNL, USA</i>
	11:10-11:30 (Invited)	Sulfate and black carbon direct effect on the progress of East Asian subtropical monsoon <i>Bin Zhu</i> <i>NUIST, China</i>
	11:30-11:45	Cloud water response to aerosols in observations and climate models <i>Minghuai Wang</i> <i>Nanjing Univ., China</i>
	11:45-12:00	Impact of fire air pollution on global ecosystem productivity <i>Xu Yue</i> <i>NUIST, China</i>
	12:00-12:15	Seasonal climatic effects and feedbacks of anthropogenic heat release due to global energy consumption with CAM5 <i>Bing Chen</i> <i>Yunnan Univ., China</i>
12:15- 13:30	Lunch	
Session II: Aerosol Observations 14:00 - 15:35 Chair: William Lau	14:00-14:25 (Keynote)	Have we grossly underestimated the aerosol cloud-mediated climate effects? <i>Daniel Rosenfeld</i> <i>The Hebrew University of Jerusalem, Jerusalem</i>
	14:25-14:45 (Invited)	Following the dust: satellite perspectives of dust sources, transport, deposition, and impacts <i>Hongbin Yu</i> <i>NASA, USA</i>
	14:45-15:05 (Invited)	Satellite remote sensing of aerosol properties over East Asia: progresses and challenges <i>Liangfu Chen</i> <i>RADI/CAS, China</i>
	15:05-15:20	Overview of aerosol and Sand Dust Storm (SDS) remote sensing from Fengyun satellites <i>Lin Chen</i> <i>NSMC/CMA, China</i>
	15:20-15:35	Characteristic of aerosol optical depth and Its association with rainfall and temperature over two biggest cities in Thailand <i>Kritanai Torsri</i> <i>HII, Thailand</i>

15:35 - 16:00	Coffee Break	
Session II: Aerosol Observations (cont.) 16:00 - 17:15 Chair: Daniel Rosenfeld	16:00-16:15	Aerosol physical and chemical properties and their impact on radiation over East Asia <p style="text-align: right;"><i>Xiaoyan Ma</i> <i>NUIST, China</i></p>
	16:15-16:30	Spatial and temporal variations of dust events over Iran <p style="text-align: right;"><i>Omid Alizadeh Choobari</i> <i>University of Tehran, Iran</i></p>
	16:30-16:45	Characteristics of new particle formation events in Brisbane, Australia <p style="text-align: right;"><i>Buddhi Pushpawela</i> <i>Queensland Univ. of Tech., Australia</i></p>
	16:45-17:00	Aerosol mass and major composition characterization in ambient air in Hochiminh city, Vietnam <p style="text-align: right;"><i>Hung Nguyen</i> <i>Nong Lam University in HCMC, Vietnam</i></p>
	17:00-17:15	Quantification of aerosol optical depth in relation to meteorological parameters over eastern and western routes of China Pakistan Economic Corridor <p style="text-align: right;"><i>Bushra Khalid</i> <i>International Islamic University, Pakistan</i></p>
17:15-17:45	Discussion	
18:00-19:30	Dinner	
Tuesday, July 16, 2019		
Session II: Aerosol Observations (cont.) 09:00 - 10:20 Chair: Xiaohong Liu	09:00-09:25 (Keynote)	Aerosol and climate changes in China <p style="text-align: right;"><i>Zhanqing Li</i> <i>Univ. of Maryland, USA</i></p>
	09:25-09:45 (Invited)	Strong impact of wildfires on the abundance and aging of black carbon in the lowermost stratosphere <p style="text-align: right;"><i>Yafang Cheng</i> <i>MPI, Germany</i></p>
	09:45-10:05 (Invited)	Temperature effect on phase state and reactivity controls atmospheric multiphase chemistry and transport of PAHs <p style="text-align: right;"><i>Hang Su</i> <i>MPI, Germany</i></p>
	10:05-10:20	A mixing degree index for dust aerosols and the estimated composition

		<i>Lin Wu</i> <i>IAP/CAS, China</i>
10:20-10:50	Coffee Break	
Session II: Aerosol Observations (cont.) 10:50 - 12:10 Chair: Zhanqing Li	10:50-11:10 (Invited)	Effect of climate variability on the dust climatology over the western United States <i>Hang Lei</i> <i>NCEP, USA</i>
	11:10-11:25	Application of tall tower on air pollution micro-meteorology: case study Bangkok, Thailand <i>Surat Bualert</i> <i>Kasetsart University, Thailand</i>
	11:25-11:40	Decomposing light absorption of black carbon and brown carbon aerosols based on the measurements of an aethalometer and a single-particle soot photometer <i>Yunfei Wu</i> <i>IAP/CAS, China</i>
	11:40-11:55	Spatial and temporal variation of PM2.5 in Almaty <i>Aiyngul Kerimray</i> <i>KazNU, Kazakhstan</i>
	11:55-12:10	Analysis of environmental airborne particles in Dakar City <i>Moustapha Kebe</i> <i>University Cheikh Anta Diop, Senegal</i>
12:10-13:30	Lunch	
Session III: Aerosol Modelling and Representation in ESMs 14:00 - 15:30 Chair: Joyce Penner	14:00-14:25 (Keynote)	The aerosol-climate story: complexity unbounded <i>V. Ramaswamy</i> <i>NOAA, USA</i>
	14:25-14:45 (Invited)	The 20th century aerosols simulations of Beijing Climate Center Earth System Model version 1 (BCC-ESM1) <i>Tongwen Wu</i> <i>CMA, China</i>
	14:45-15:00	Dust Radiative Effects on Climate by Glaciating Mixed-Phase Clouds <i>Xiaohong Liu</i> <i>UW&IAP/CAS, USA</i>
	15:00-15:15	A regional scale modeling analysis of aerosol in China in 2020 based on CMIP5 model <i>Meigen Zhang</i> <i>IAP/CAS, China</i>

	15:15-15:30	Global dust emissions in climate models and ESMs <i>Chenglai Wu</i> <i>IAP/CAS, China</i>
15:30-16:00	Coffee Break	
Session III: Aerosol Modelling and Representation in ESMs (cont.) 16:00 - 17:15 Chair: Philip Rasch	16:00-16:15	A new PDF cloud scheme and its impact on tropical cloud and precipitation simulations <i>Yanluan Lin</i> <i>Tsinghua Univ., China</i>
	16:15-16:30	An online coupled regional climate-chemistry-aerosol model (RIEMS-Chem)-current status, evaluation and application <i>Zhiwei Han</i> <i>IAP/CAS, China</i>
	16:30-16:45	A global observation-constrained modeling of black carbon by updating the emission inventory and transport model <i>Rong Wang</i> <i>Fudan Univ., China</i>
	16:45-17:00	Simulation of black carbon and aerosol optical depth over Southeast Asia region <i>Didin Agustian Permadi</i> <i>National Institute of Technology Bandung, Indonesia</i>
	17:00-17:15	Aerosol optical depth and burden of large sea salt aerosols <i>Kece Fei</i> <i>IAP/CAS, China</i>
17:00-17:30	Discussion	
18:00-19:30	Dinner	
Wednesday, July 17, 2019		
Session III: Aerosol Modelling and Representation in ESMs (cont.)	09:00-09:25 (Keynote)	High latitude aerosol, water and heat transport by filamentary structures <i>Philip Rasch</i> <i>PNNL, USA</i>

09:00 - 10:30 Chair: Minghua Zhang	09:25-09:45 (Invited)	A study on the factors affecting haze in South China under climate change <i>Xuemei Wang</i> <i>JNU, China</i>
	09:45-10:00	Impact of topography on aerosol transport from the southern Tibetan Plateau and its implication for aerosol climatic impact <i>Chun Zhao</i> <i>USTC, China</i>
	10:00-10:15	Evaluation on the global aerosol distributions simulated with two different aerosol models in the Community Atmosphere Model version 5.3 <i>Yiran Peng</i> <i>Tsinghua Univ., China</i>
	10:15-10:30	The evaluation of the IAP-AACM in the CAS-ESM and its application <i>Ying Wei</i> <i>IAP/CAS, China</i>
10:30-11:00	Coffee Break	
11:00-11:50	Discussion	
11:50-12:00	Closing Session	
12:00-13:30	Lunch	

Contact

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