



## Chinese, Chilean Presidents Witness Signing of MoU on Joint Astronomical Observatories

**O**n November 22, 2016, at the witness of Chinese President XI Jinping and Chilean President Michelle Bachelet, a Memorandum of Understanding was inked by YAN Jun, director general of the National Astronomical Observatories of the Chinese Academy of Sciences (NAOC) and Jorge Tabilo Álvarez, President of the Catholic University of the North (UCN), to jointly establish an astronomical observation base in Chile.

Thanks to its unique climate conditions and strong government support, Chile has become one of the most important places on Earth for astronomy research. Over the past few decades, countries like the U.S., Japan and the EU have built cutting-edge observational facilities in the country. In particular, the Ventarrones site (VTRS) which belongs to the UCN has been intensively surveyed by astronomers from the CAS South America Center for Astronomy (CASSACA), and is considered as an excellent site for astronomic observations. It is located in the famous Atacama Desert about 1,200 km north from Santiago at an altitude of 2,900 m.

The VTRS was previously considered as a candidate site for ESO's 39m European Extremely Large Telescope (now under construction), and its sky quality and conditions have been evaluated and positively confirmed by world-class institutions. In order to promote observational astronomy and related science and technologies, and to strengthen the collaboration of scientists, engineers, and students between the two countries, NAOC and UCN have agreed to form a bilateral partnership to develop the VTRS site into a world-class research base for observational astronomy. The site is also expected to play an important role in scientific outreach and education.



This marks the second time the signing of a MOU was witnessed by leaders of the two states. In 2015, Chinese Premier LI Keqiang and Chilean President were present at the signing ceremony of the China-Chile Joint Astronomical Data Center. The new MOU is also a highlight in CASSACA's past three years of work, after it was founded in Chile in 2013.

Setting up an observational base in Chile is a strategic step that has been carefully considered by the Chinese scientific community, based on the long-term plan for the country's astronomy development, said YAN. The signing and implementation of the MOU will enable China for the first time to have a world-class observational site. This will be of great significance to the advancement of astronomical observation and techniques in China, and promote cooperation between China and Chile in the field.

Dr. Cameron, Director of ESO (Chile), commented in a congratulatory letter that this collaborative approach is an "excellent choice" for China. He also said that ESO is ready to provide assistance to the future development of the VTRS site.

## Chinese Scientists Bag ACM Gordon Bell Prize

**A** team of Chinese researchers received this year's Gordon Bell prize from the U.S.'s Association for Computing Machinery (ACM), a top award

in the field of supercomputing, at the Supercomputing Conference convened in Salt Lake City, Utah on November 17, 2016.

This is the first time Chinese scientists claimed the honor. “It’s a historic breakthrough,” said FU Haohuan, deputy director of the National Supercomputing Center in Wuxi and one of the team members. The researchers come from the CAS Institute of Software, the CAS Institute of Computing Science, Tsinghua University, Beijing Normal University, etc.

They were honored for developing a method for calculating atmospheric dynamics that could be used to improve global climate models as well as weather predictions.

The Gordon Bell Prize, presented every year at the Supercomputing Conference, was established in 1987 by Gordon Bell, a pioneer in high-performance and parallel computing. It tracks the progress of parallel computing and rewards innovation in applying high performance computing to challenges in science, engineering, and large scale data analytics. (Based on Xinhua news release)



With a Linpack mark of 93 petaflops, *Sunway TaihuLight* developed by the National Supercomputing Center in Wuxi became the world’s fastest supercomputer in June 2016.

## Distinguished Materials Scientist Passes Away at 98

**Y**AN Dongsheng, renowned materials scientist and Member of the Chinese Academy of Sciences, died in Shanghai on September 18, 2016 at the age of 98.

As a pioneer in advanced inorganic materials in China, YAN was among the most influential leaders in his field. He had also served as honorary director of the Shanghai Institute of Ceramics, CAS.

Born in Hangzhou, Zhejiang Province in 1918, YAN received his PhD degree from the University of Illinois-Urbain-Champaign, USA in 1949. He returned to China in 1950 and had ever since devoted his life to the advancement of the country’s materials research.

YAN’s research was mainly focused on high performance ceramics. He brought many innovative



ideas to the field and greatly enhanced the understanding of how high-temperature materials work. He also promoted the design and micro-regulation of high-temperature materials and the development of ceramic matrix composites.

The carbon fiber reinforced composites pioneered by his group have contributed significantly to national defense technologies. He also headed the research and development of China’s large size scintillation crystals.

He was elected as a CAS Member in 1980, a Member of TWAS in 1993, and a Member of CAE in 1994.

YAN was also respected as a highly accomplished educator and active advocate of China’s science system reforms.



## New China-UK Center for Life Sciences Kicks off in Beijing

On November 2, 2016, the Center of Excellence for Plant and Microbial Science (CEPAMS) was officially launched in Beijing as a joint establishment between CAS and the John Innes Center (JIC) of the UK. CAS Vice President ZHANG Yaping and Martyn Roper, Minister and Deputy Head of Mission at the British Embassy in Beijing attended the opening ceremony.

As collaboration between the JIC and two CAS institutes, namely the Institute of Genetics and Developmental Biology (IGDB) and the Institute of Plant Physiology and Ecology (SIPPE), CEPAMS brings together three world-leading laboratories from the UK and China to tackle global challenges of food security and sustainable health care, and aims at nurturing excellent science. Its transnational research team will focus on the improvement of food crops and the production of high-value natural products from plants and microbes.

CEPAMS opened its first lab at IGDB in Beijing with BAI Yang as its founding group leader. BAI had worked for the Max Planck Institute for Plant Breeding Research in Cologne, Germany before he joined the center. His research area is plant root-associated microbes and

agricultural productivity.

It is a “great honor” to work as the founding Group Leader of CEPAMS, BAI said. He had already benefited from his position at CEPAMS as he refined his future research direction and established his research group. “I look forward to doing ground-breaking research, and to further strengthening the scientific partnership between the UK and China,” he added.

CEPAMS campuses are located in Beijing, Shanghai, and Norwich. As affiliated members of the JIC faculty, CEPAMS group leaders have the privilege to conduct research collaboration with other JIC faculty and attend internal academic meetings at JIC.

CEPAMS was established with funding support from the CAS and the UK Biotechnology and Biological Sciences Research Council, one of the UK’s seven Research Councils. Since 2014, a total of 21 CAS-JIC collaborative research projects have been launched.



## Kazakhstan Ecologist Receives Chinese Government Friendship Award

David Blank, a visiting professor at the Xinjiang Institute of Ecology and Geography (XIEG) of CAS, was awarded the Friendship Award by the Chinese Government in September 2016 for “promoting the institute’s research ability in desert ecosystem and wildlife management in the arid areas of Central Asia”, and for “promoting scientific cooperation between China and Central Asia countries”.

Dr. Blank has been studying the conservation biology of Ungulate and the management of desert ecosystem at XIEG since 2010. His research collaboration



with Chinese partners has led to the publication of 33 papers and a book entitled *Ecological Status and Conservation of Wildlife in Central Asia*. He has also translated about 30 Russian monographs into English, compiling valuable materials on current wildlife resource distribution status in Central Asia.

Dr. Blank is now working at the Kyrgyzstan Branch

of the CAS Research Center for Ecology and Environment of Central Asia.

Starting from 1991, the Chinese Government Friendship Award has been given to foreign experts who have made outstanding contributions to the country's economic and social progress. Every year, a total of 50 foreign experts are selected for the award.

## China Opens First Overseas Satellite Ground Station

The China Remote Sensing Satellite North Polar Ground Station (CNPGS), the country's first overseas land satellite receiving station, was put into trial operation near Kiruna, Sweden by the end of 2016.

Constructed and operated by the Institute of Remote Sensing and Digital Earth (RADI) of CAS, the station will receive data transmitted from high-resolution Earth observation satellites. The construction took two years and passed the on-site inspection on December 15.

CNPGS, located at the Esrange Space Center at 67°53' N and 21°04' E about 200 km north of the Arctic Circle, has a special geographical advantage because polar-orbiting satellites fly over the station due to their north-south orbital direction around Earth.

"CNPGS has laid a solid foundation for the long-term cooperation between China and Sweden in science, technology and economy," said CHEN Yuming, Chinese Ambassador to Sweden in his congratulation letter.

CNPGS is expected to enhance the transmission efficiency of satellite data and improve China's accessibility to global remote sensing data, which is of great significance in emergencies such as the aftermath of natural disasters.



The inauguration ceremony of the CNPGS.

It is also the first engineering application of the three-band antenna technology for China. It is capable of receiving all-weather, all-time, and multi-resolution satellite data, and is compatible with follow-up Ka-band receiving requirements. The construction of CNPGS has led to breakthroughs in many key technologies, such as a large-scale three-axis antenna structure system. As a light, modular, low-temperature, easily disassembled and unmanned system, it can perform remote fault diagnosis and maintenance.



A beautiful view of the China Remote Sensing Satellite North Polar Ground Station.