

Content

Science News from Chinese Media in January 2009
 Collected and Compiled by the Helmholtz Beijing Office

Helmholtz News Concerning China	3
1 Science News	4
1.1 Energy	4
CAS launched energy power research center	4
Significant progress achieved in "coal-to-oils" process	4
Solar Power Plants to Spring Up in China	4
Chinese Academy of Sciences launches Action Plan for Solar Energy.....	5
1.2 Earth and Environment	6
China's Antarctic inland team arrives at Dome Argus.....	6
1:1,000,000 Geomorphologic Atlas of China to be Released	6
Sea level along coastal China to rise 0.13 meter in 30 years	7
1.3 Health.....	7
Deficiency of a β -arrestin-2 Signal Complex Causes Insulin Resistance	7
CAS Starts up Mega Project in Life Sciences in Shanghai	8
Is Athlete's Brain Different from That of Average People?.....	8
China puts 10 bln yuan toward new drugs R&D, infectious disease control	9
1.4 Key Technologies	9
China-made supercomputer to be installed in Shanghai	9
1.5 Structure of Matter.....	10
The first "Quantum Repeater" chosen as the "Best of 2008".....	10
Josephson Effect for Photons Observed in New Optical System.....	10
1.6 Transport and Space	11
Shenzhou-7's monitor satellite finishes mission after 100 days in space	11
China's Mission to Mars Set for Take-off.....	11
China primarily masters accompanying satellite technology	12
China's 1st lunar probe to impact moon at proper time.....	12
China to hand over satellite "Simon Bolivar" to Venezuela.....	13
China's Fengyun-3A weather satellite begins weather monitoring	13

China Highlights Jan. 2009

China to have global satellite navigation system by 2015	14
Laboratory of Precision Navigation, Positioning and Timing Technology Established in CAS.....	14
2 Innovation Management	14
Steady growth in China's science and technology investments in 2007.....	14
Chinese Academy of Sciences to Invite Overseas Scholars.....	15
CAS Plans to Reform Its Evaluation System	16
3 China's International Science Cooperation.....	16
Extraplanet Discovered by Chinese-Japanese Joint Project.....	16
Chinese Academy of Sciences honors three foreign scientists.....	16
Three Foreign Scientists Received 2008 CAS International Science and Technology Cooperation Award.....	17
4 Miscellaneous	18
CAS establishes two mathematical key laboratories.....	18
Call for more overseas talents	18
China's telecoms sector gets 3G licenses	19
Chen Zuyu Elected Vice President of ISSMGE.....	20
Three major problems in China's education system.....	21
Chen Lin Elected President of IACS.....	21
Chinese vice premier urges deepening of polar and oceanic research	21
Chinese scientist Chen Deliang to become executive director of ICSU	22
China, Germany agree on maglev technology transfer	23
5 Abbreviations	23

Helmholtz News Concerning China

The Helmholtz-CSC programme for the junior scientists exchange has been running. As we could not collect 51 position calls from Helmholtz scientists (some calls may contain and offer more than one positions), and we got only over 40 independent applicants, we have given up our previously set deadline on 15.01.2009. and to allow the Chinese candidates to watch the CSC deadline on 20.03. This would mean that once our Helmholtz scientists find an excellent Chinese student, he could still have the time until the last minute to secure a joint scholarship. Actually, we do know some of the scientists do have found their candidates, although they have not yet made a call and delivered a call to us. Their decision would still be respected, as long as there are still available scholarships from the 50 positions and we have the time to forward this information to CSC in time after their submission of their formal wish to Berlin.

At this moment, we find over 20 of the 51 calls without even one applicant. However, there are also exemptions: Dr. I. Drexler from HMGU and Dr. A. Weber from DKFZ have all got over 7 candidates. For those scientists, who have had a couple of students, they should already try to make an interview to make up their own decision. Other wise, the students without a confirmation may run away for the other offers. Anyone, who might want to have some comments or suggestions from our Beijing Office, or to have a ranking of the applicants, should contact the Helmholtz Beijing Office immediately.

We strongly recommend our scientists to make at least a telephone call to the applicants, more effective would be using online chatting system, like MSN, SKYPE. Just on 16.02. 09 last Friday, Helmholtz Beijing Office has assisted the Institute of Space Life Science of DLR to interview 6 Chinese candidate per Adobe Video-conference facility. It is the best to chat with the candidate and at the mean time to be able to see their facial expression.

At the first day of January, under the invitation from the Southwest Institute of Plasma (SWIP) and the Chengdu Institute of Biology, Dr. He made a visit to Chengdu. He has had the opportunity to set together with the scientists of both institutes and to explain the funding opportunities from both governments for the promotion of collaboration, especially the available scholarships for personal exchange. SWIP has been an old friend to IPP concerning the transfer of ASDEX and the CIB could work together with Helmholtz scientists on microbiology, biodiversity and biomass.

As 2009 has been declared as the Sino-German Year of Science and Education, and BMBF has just release a call <http://www.bmbf.de/de/13355.php> for promoting cooperation with Chinese partners with a deadline on 28.02. Helmholtz Beijing Office would be very glad to assist our colleagues to search for partners in China or to run joint bilateral activities in China.

Helmholtz Beijing Office

1 Science News

1.1 Energy

CAS launched energy power research center (CAS, 2009-01-05)

Chinese Academy of Sciences launched a new Energy Power Research Center at the end of year 2008 in a key portal city Lianyungang, Jiangsu province.

Jointly constructed by the provincial government of Jiangsu and the municipal government of Lianyungang, the Energy Power Research Center will complete the installation of the pilotscale experimental structures of a coal gasification plant as well as a heavy duty gas turbine as early as Sept. 2009.

The center will conduct important projects covered by the National High-Tech Research and Development Plan (863 Plan), such as IGCC (Integrated Coal Gasification Combined Cycle) demonstration projects and key technology and system for Heavy Duty Gas Turbine. The engineering research facilities for IGCC will be established by the year 2013.

Significant progress achieved in "coal-to-oils" process (People's Daily, 2009-01-08)

At 2:30 pm on December 31, 2008, the Shenhua demonstration project for the megatonnage direct liquefaction of coal went through the full production process and generated qualified target products such as naphtha and diesel.

The successful trial made China the only country in the world to have mastered the key technologies to realize this process, said Zhang Xiwu, chairman of the board of the Shenhua Group.

The development has deep significance in strengthening China's energy self-sufficiency, raising its overall economic strength and its continuation along the path of "clean energy with Chinese characteristics", Zhang added.

Techniques, technologies and catalysts applied in the core equipment of the Shenhua project all detain self-owned intellectual property rights.

The Shenhua Group has obtained patent licenses from the State Intellectual Property Office for its techniques and technologies on direct liquefaction of coal.

The technology also applied for patent protection in 13 countries including the US, Germany and Japan, and has already obtained patent licenses in countries such as Russia and Ukraine.

Solar Power Plants to Spring Up in China (CAS, 2009-01-12)

Two large solar power plants will be built in the western plateau provinces of Qinghai and Yunnan in 2009, with the expectation for China to cut domestic reliance on coal and oil.

The Qinghai project, a gigawatt-level solar station, will begin the first phase construction in 2009. The plant was funded by an initial investment of 1 billion yuan (about 146 million U.S. dollars). It could become the world's largest when completed, according to a recent joint statement of the developers.

China Highlights Jan. 2009

The NASDAQ-listed China Technology Development Group Corp. and the private-owned Qinghai New Energy Group are overseeing the design, construction, installation and operation of the station. The government of Haixi Autonomous Prefecture of Mongolia and Tibet nationalities, where the project is located, signed an agreement with the two companies to help them acquire land, subsidies and project approvals from the central government.

Roughly a month ago, the southwestern Yunnan Province announced it would begin construction of a 166-megawatt solar plant with an investment of 9.1 billion yuan -- the largest in China at the time of the announcement.

Yang Mingying, a researcher of the Chinese Academy of Social Sciences, said construction of the two projects would take time, but developing renewable energy resources is an irresistible trend in China. Statistics from the China Renewable Energy Society showed more than two thirds of China's land receives more than 2,200 hours sunshine annually, more than many other regions of similar latitude such as Europe and Japan, which gives China a potential solar energy reserve equivalent to 1,700 billion tons of coal.

China is now the world's largest producer of solar heaters and the third largest manufacturer of photovoltaic cells, the National Development and Reform Commission (N.D.R.C.) statistics show.

However, N.D.R.C. pointed out, China still lags far behind other countries in solar power generation due to the high cost, limited government subsidies and market access.

The N.D.R.C. drafted a long-term plan for renewable energy use in 2007 and promised that the government would provide stimulus policies to encourage companies involved to develop renewable energy sources.

"The cost of solar generation is still relatively high compared with the developed solar markets - Germany and Japan," said Charles Yonts, a solar and clean-tech analyst with the HK-based brokerage CLSA.

"But, we will see costs come down rapidly as installers gain more experience," he added.

In a law passed in 2005 by the National People's Congress, China's top legislature, China set a goal to increase the share of renewable energy resources to 10 percent of China's total energy consumption by 2020.

"Effective development of renewable energy sources in China need careful investigation and a combination of different energy sources such as wind, solar and biomass," said Yang Mingying.

Chinese Academy of Sciences launches Action Plan for Solar Energy (People's Daily, 2009-01-14)

The Chinese Academy of Sciences (CAS) announced the official launching of the Action Plan for Solar Energy on January 12.

The plan is divided into three phases: distributed utilization of solar energy by 2015, substitution utilization by 2025 and extensive utilization by 2035, aiming to make solar energy one of China's important energy sources around 2050.

Reporters learned that CAS will devote all its efforts and collaborate with China's relevant scientific and technological resources to establish a number of public platforms for solar energy technologies as well as research centers.

The focus will be on the key scientific issues concerning the transformation and utilization of solar energy such as photovoltaic, photothermal, photochemical and photobiological techniques.

CAS will strive to make breakthroughs in the areas of theory, methodology, materials and techniques. At the same time, through the integration of production, study and research, the plan will promote the research and development of core techniques, application models and transfer transformations, and eventually the formation of a scientific and innovative value chain for the utilization of solar energy from basic research and application to marketing.

All these will be done in an effort to turn solar energy into a new source of energy that can soon be utilized on a large scale.

1.2 Earth and Environment

China's Antarctic inland team arrives at Dome Argus

(Xinhua Net, 2009-01-07)

China's 25th Antarctic expedition team arrived at Antarctica's Dome Argus (Dome A) zone after a 20-day march of about 1,250 km, leader of the team told Xinhua Wednesday.

The team late Tuesday arrived at the destination, some 7.3 km away from the location of the to-be-built Kunlun Station, China's first inland Antarctic research station and also the country's third station in Antarctica after Changcheng Station and Zhongshan Station.

All the materials allocated for the construction of Kunlun and eight snowmobiles arrived at the camp in the Dome A zone, the pole's highest icecap at 4,093 meters above the sea level.

The advance of the expedition had been hampered as the traction force of its vehicles slowed significantly in Antarctica's mild zone, Li Yuansheng, leader of the team, told Xinhua through Iridium satellite phone.

However, the team managed to lighten its load and make traveling easier by leaving some sleds behind for picking up later, he said.

All the vehicles worked well, and all the 28 inland team members were in good physical condition.

Chinese researchers made their first Dome A trip in January 2005. In January 2008, the 24th Antarctic expedition team went there for the second time to prepare for the construction of Kunlun.

Six countries including the United States and Russia have built stations in the Dome A zone so far.

1:1,000,000 Geomorphologic Atlas of China to be Released

(CAS, 2009-01-15)

A full set of 1:1, 000, 000 Geomorphologic maps of China was completed recently and will be published soon, according to the news released by State Key Laboratory of Resource and Environmental Information System at the Institute of Geographical Sciences and Natural Resources Research, CAS.

In succeeding the 15 sheets of geomorphologic maps with the same scale finished in 1980's, this newly completed atlas composes of 74 sheets including land and ocean. It is the first of its kind ever completely codified in the world.

The compliance was aimed at providing basis for environmental and biological investigations and also for regional development programming. So far it has found its application in National Key Projects such as national survey on soil quality, and surveying and mapping of the western part of China.

A geomorphologic data sharing system was also built along with the Geomorphologic Atlas.

Sea level along coastal China to rise 0.13 meter in 30 years

(Xinhua Net, 2009-01-28)

The sea level along China's coastal areas will rise 0.13 meter in the next three decades, according to a report by the State Oceanic Administration (SOA).

The average increase in sea level has been about 2.6 millimeter per year in the past 30 years, 0.8 millimeter higher than the world's average, according to the administration's report of China's sea level changes.

The report said among all the coastal seas, the East China Sea saw the fastest rise in sea level, with an annual increase of 2.9 millimeter over the past three decades.

Li Xiaoming, director of the department of oceanic protection of the SOA, said global warming, earth subsidence and unusual climate phenomena all attributed to the rise of sea level.

SOA statistics show that over the past 30 years, air and sea temperatures along China's coastal areas rose 1.1 Celsius and 0.9 Celsius respectively.

Li said the rise of sea level could add to damage caused by marine disasters such as storm tides, coast erosion, sea water encroachment and soil salinization.

The Yangtze River Delta, the Pearl River Delta, the Yellow River Delta and coastal areas of Tianjin -- regions located along the coast with the country's most developed economy -- are the key areas that will suffer the impacts of a rise in sea level, Li said.

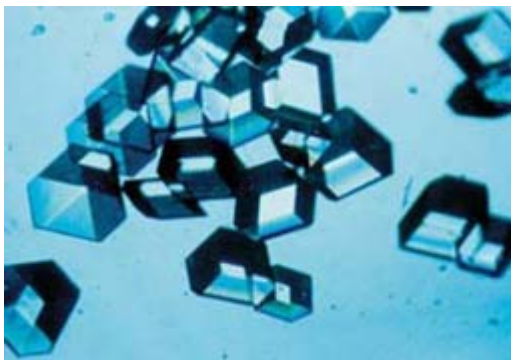
The SOA has suggested governments of coastal cities improve sea level monitoring and take the impact of sea level rise into consideration when making economic development plans, according to the report.

The SOA has also asked the governments to control groundwater exploitation, reinforce dikes and improve protection of coastal wetlands.

1.3 Health

Deficiency of a β -arrestin-2 Signal Complex Causes Insulin Resistance

(CAS, 2009-01-07)



A recent research discovers that the deficiency of a β -arrestin-2 signal complex contributes to insulin resistance in human body and therefore results in type 2 diabetes. The research was carried out by a team led by Pei Gang, a CAS academician from Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences. The related paper was published by Nature online January 5, 2009.

More than 25 million people diagnosed diabetes around the world, and in 20 years, the number could increase to 38 million. Type 2 diabetes is accountable for 90% of the diabetes cases and has been

proved to be caused by insulin resistance, which means human body can generate enough insulin, but for some reason, cannot react to it.

Pei Gang and his team show that in diabetic mouse models, β -arrestin-2 is severely down regulated. Knockdown of β -arrestin-2 exacerbates insulin resistance, whereas increasing the level of β -arrestin-2 restores insulin sensitivity in mice. Further investigation reveals that insulin stimulates the formation of a new β -arrestin-2 signal complex, in which β -arrestin-2 scaffolds Akt and Src to insulin receptor. Loss or dysfunction of β -arrestin-2 results in deficiency of this signal complex and disturbance of insulin signaling in vivo, thereby contributing to the development of insulin resistance and progression of type 2 diabetes.

The new findings provides new insight into the molecular pathogenesis of insulin resistance, and implicates new preventive and therapeutic strategies against type 2 diabetes.

Paper abstract can be found at:

<http://www.nature.com/nature/journal/vaop/ncurrent/abs/nature07617.html>;

Pei Gang's homepage: <http://www.cell-research.com/editor/chief.htm>.

CAS Starts up Mega Project in Life Sciences in Shanghai

(CAS, 2009-01-08)

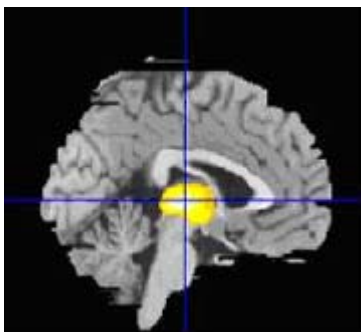
"Platform and Technical Support for Basic Research and Application in Life Sciences, Shanghai Branch of Chinese Academy of Sciences", one of China's key projects in life sciences was launched recently in Shanghai.

The mission of this 600-million RMB mega project is to solve important scientific and technological problems related to nutrition research, public health and population research. It also expected to accelerate the development of the bio-medical industry of lower Yangtze River and to help the discoveries of blockbuster new medicine.

"This is one of China's all-around research bases focused on life sciences," addresses Chen Xiaoya, president of Shanghai Institutes of Biological Sciences, CAS. He promises that the platform will address critical national needs of China by working closely with other well-established research institutes in the area such as Institute Pasteur of Shanghai, CAS; CAS-MPG Partner Institute for Computational Biology; Institute of Neuroscience, SIBS, CAS; Institute for Nutritional Sciences, SIBS, CAS and Institute of Health Sciences, SIBS, CAS.

Is Athlete's Brain Different from That of Average People?

(CAS, 2009-01-12)



Athletes' cerebral gray matter concentration in bilateral thalamus drastically higher than average people.

During the Olympic Games just held in Beijing this summer, athletes like Usain Bolt and Michael Phelps shocked the world with their unbelievable performance. Upon amazement, we cannot help wonder: does the professional training affect the athletes' brain in addition to their muscles and hearts?

Using Nuclear Magnetic Resonance Technology, Wei Gaoxia, Ph.D and Luo Jing, Ph.D from the Institute of Psychology, CAS recently conducted a research on the brain structure of 12 Chinese top Diving athletes for the first time. Compared with 12 students who match

China Highlights Jan. 2009

exactly with the athletes in gender, age, weight and other demographic factors, these athletes' cerebral gray matter density in bilateral thalamus and left frontal lobe (BA6) is dramatically higher.

According to previous research, patients affected by Huntington's disease and Parkinson's disease have a lower than normal cerebral gray matter density. The research conducted by Wei and Luo approved from a different approach the correlation between cerebral gray matter density in bilateral thalamus and human movement behavior. The research also suggests that rehabilitation training focusing on movements and skills could effectively increase human brain's cerebral gray matter density in bilateral thalamus.

In addition to providing new insights in treating dyskinesia and rebuilding body movement ability, this finding corrects the delusion that athletes have simple mind. As a matter of fact, in giving them more athletic ability, training makes their brain more complex. The research also supports the hypothesis that long professional experience could trigger plastic changes in related brain regions. Practice makes perfect may be scientifically true.

China puts 10 bln yuan toward new drugs R&D, infectious disease control (Xinhua Net, 2009-01-12)

China's Ministry of Health said Monday morning the government had allocated roughly 10 billion yuan (1.46 billion U.S. dollars) to two projects on infectious disease control and new drugs research and development.

Ministry spokesman Mao Qun'an said the ministry planned 1,161 research topics in the two primary fields to be carried out by the year 2010.

The ministry's mid-term R&D outline encourages Chinese medical researchers to develop new drugs and improve the prevention and cure of infectious diseases, such as AIDS and hepatitis, by the year 2020.

The ministry's December figures show China has about 264,000 confirmed HIV carriers, 78,000 of whom are AIDS patients. AIDS is now emerging as a major health concern to the Chinese.

The ministry said December that AIDS, rabies, tuberculosis, hepatitis B and hemorrhagic fever were the top five killers, accounting for 94 percent of the infectious disease deaths in November.

1.4 Key Technologies

China-made supercomputer to be installed in Shanghai (CAS, 2009-01-04)

Dawning 5000A, a China-made supercomputer, is expected to be installed in Shanghai in April, its developer said Thursday.

The supercomputer, with a peak capability of more than 200 trillion FLOPS (Floating-point operations per second), will be used for information processing and fundamental scientific research at the Shanghai Supercomputer Center (SSC), said Li Jun, president of Tianjin-based Dawning Information Industry Co.

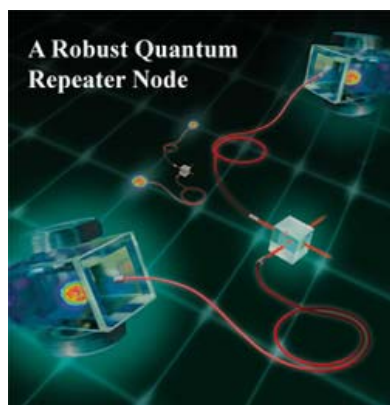
The SSC, founded in 2000, is a high-performance public computation platform.

Dawning 5000A will help with weather forecasting, construction of seabed tunnels, environmental

protection, large passenger aircraft production and earthquake predictions, according to the SSC. Dawning 5000A covers a floor space of 75 square meters and consumes 700 kilowatts per hour. It was paid for by the Ministry of Science and Technology and Shanghai Municipal Government. Even with expensive imported AMD chips, Dawning 5000A cost only 200 million yuan (29 million U.S. dollars). That price is significantly lower than what the U.S. Department of Energy spent on IBM "Roadrunner," which cost 100 million U.S. dollars. Chinese computing scientists built the country's first supercomputer in 1995.

1.5 Structure of Matter

The first "Quantum Repeater" chosen as the "Best of 2008" (CAS, 2009-01-02)



The first experimental realization of "quantum repeater" by Prof. Pan Jianwei from University of Science and Technology of China (USTC), CAS and his team, was recently chosen as the "Best of 2008" by the European Physical Society. The related paper was published in Nature on August 28, 2008.

Quantum communication has been a hot subject in the field of quantum physics and information science owing to its high efficiency and tight security nature. Quantum repeater is a device that will be needed to transmit quantum information over long distance. Prof. Pan Jianwei and his team at Hefei National Laboratory for Physical Sciences at Microscale successfully resolved the stability problem in long distance quantum communication. On July 1, 2008, Nature issued another breakthrough of Prof. Pan Jianwei: Experimental demonstration of five-photon entanglement and open-destination teleportation.

Josephson Effect for Photons Observed in New Optical System (CAS, 2009-01-20)

The interaction of light and matter has always fascinated physicists and layman as well. Recently a group of researchers led by Dr. W. M. Liu from Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, CAS published their findings on Josephson effect for photons in Physical Review Letters.

The Josephson effect is the phenomenon of current flow across two weakly coupled superconductors, separated by a very thin insulating barrier. It has important applications in quantum-mechanical circuits, such as superconducting quantum interference devices.

Dr. W. M. Liu and his team successfully designed and built an optical system that allows for direct observation of the photonic Josephson effects in two weakly linked microcavities containing ultracold two-level atoms. By moving the ultracold atoms within one cavity, they simulated an analogous superconducting circuit and realized both the alternating- and direct-current (ac and dc) photonic Josephson effects.

The research provides a strategy for constructing novel interference devices of coherent photons and enables new investigations of the effect of many-body physics in strongly coupled atom-cavity systems.

1.6 Transport and Space

Shenzhou-7's monitor satellite finishes mission after 100 days in space (CAS, 2009-01-05)

The accompanying satellite of Shenzhou-7 orbital module has accomplished its preset mission after 100 days in space, the Beijing Aerospace Control Center (BACC) said on Sunday.

This achievement marks China's "preliminary mastery of satellite monitor technology," the center said. Since there are still some extra fuel left, the satellite will continue its flight for more scientific experiments.

After being released on Sept. 26, one day after China's third manned spacecraft was launched, the accompanying satellite was adjusted 13 times through engine ignitions so that it could focus on the orbital module of Shenzhou-7.

The center said the accompanying satellite has been flying around the orbital module in an elliptical circle, with the farthest distance of 7.6 kilometers and the nearest of 3.8 kilometers.

The satellite has sent back thousands of high-quality pictures of the orbital module, which were captured by its two cameras.

According to the center, the three Taikonauts aboard Shenzhou-7-- Zhai Zhigang, Liu Boming and Jing Haipeng -- have ended their tours across the country, and they will continue their regular training course to prepare for the establishment of China's first space station.

China successfully launched the Shenzhou-7 spacecraft on Sept.25 last year, making it the third country in the world to conduct extravehicular activity (EVA) in space following the former Soviet Union and the United States.

China's Mission to Mars Set for Take-off (CRI, 2009-01-05)

China's first mission to Mars is due to take off in October while the country's second moon probe is expected to blast into the sky a year ahead of schedule, a Hong Kong-based newspaper has revealed.

A Russian-made rocket will launch the Yinghuo-1 satellite on its 350-million-kilometer journey, and it is expected to reach Mars on August 29, 2010, Wen Wei Po reported.

At that time the distance between Earth and Mars will be about 56 million kilometers -- the shortest distance between the two, said Chen Changya, chief designer of the China-Russia Mars exploration project.

The Chinese-developed Yinghuo-1, which means firefly, will explore the Martian environment during its year-long mission and carry out research as to how surface water on the planet disappeared, Chen said.

Shadow periods are considered the greatest challenges facing Yinghuo-1. There will be seven during its orbits around Mars.

China Highlights Jan. 2009

Each shadow period, which prevents the satellite receiving solar energy, will last 8.8 hours. Yinghuo-1 has to go to sleeping status and restart itself after getting through each shadow.

Researchers are still looking at ways to help the satellite sustain extremely low temperatures as they will plunge to minus 200 degrees Celsius in the shadows, Chen added.

Meanwhile, China's second moon probe, Chang'e-2, is likely to be launched this year, a year ahead of schedule, the newspaper said.

Chang'e-2 will collect more detailed images and statistics of the moon's surface.

In 2012, Chang'e-3 is expected to carry a lunar landing spacecraft and a moon rover. In the final phase, another rover will land on the moon and return to Earth with soil and stone samples for scientific research in or around 2018, the newspaper said.

The country launched its first lunar probe, Chang'e-1, on October 24, 2007.

China primarily masters accompanying satellite technology

(People's Daily, 2009-01-06)

Since the accompanying satellite of Shenzhou VII was launched from the orbital module on September 26, 2008, it has been running successfully for 100 days, which indicates that China has mastered primary technology of accompanying satellite, according to Beijing Aerospace Control Center.

During the operation of the Shenzhou VII accompanying satellite, ground control staff remotely changed the track of the satellite 13 times. The satellite has been circling the orbital module on an elliptical track from far away to close by, with the furthest distance being 7.6 kilometers and the nearest distance being 3.8 kilometers.

During the orbiting process, the two cameras on the satellite have transmitted back several thousand complete pictures of the orbital module, all of clear quality.

Although the accompanying satellite has completed its historical mission, because the satellite still has some fuel left, ground control staff will carry out scientific experiments including "orbital control" to accumulate data for the further mastering of accompanying satellite technology.

In addition, after wrapping up promotional visits to different localities, the three taikonauts of the Shenzhou VII mission will resume regular physical training in order to make preparations for the next step of China's mission of building a space station.

China's 1st lunar probe to impact moon at proper time

(Xinhua Net, 2009-01-08)

Chang'e-1, China's first lunar probe, will impact the moon at a proper time, said an unidentified official with the State Administration of Science, Technology and Industry for National Defense here Thursday.

But the official did not reveal any details about the impact timing.

According to the commission, China would launch its second lunar probe, Chang'e-2, in 2010 or 2011. The China National Space Administration (CNSA) said earlier December that Chang'e-1 had successfully lowered its orbit from 200 kilometers away from the moon's surface to 100-kilometers.

Scientists did this to conduct more specific observation, according to CNSA.

The lunar orbiter would remain at the new height before scientists lower its orbit again to gather information for the future impact.

China Highlights Jan. 2009

Chang'e-1 was launched into space on Oct. 24 last year. This was the first step of China's three-stage moon mission. The probe sent the first full map of the moon's surface back to China in November 2008.

A moon landing and launch of a moon rover is planned for 2012.

During the third phase of the plan, scheduled for 2017, another rover will land on the moon and return to earth with lunar soil and stone samples for scientific research.

"Chang'e" is named after a legendary Chinese moon goddess.

China to hand over satellite "Simon Bolivar" to Venezuela (Xinhua Net, 2009-01-10)

Venezuelan officials said on Friday China will on Saturday formally hand over the "Simon Bolivar" satellite as part of a joint project between the two countries.

A handover ceremony will be held at one of the satellite's mainland stations in the town of El Sombrero, 300 km south of Caracas, Telecommunications and Information Minister Socorro Hernandez said.

The Chinese-built satellite will promote telecommunication services in Venezuela. The whole project costs 406 million U.S. dollars and includes the building of technological bases, manufacturing and launch of the satellite and training of Venezuelan professionals.

It is China's first contract for satellite manufacturing and launch service for a Latin American country. The "Simon Bolivar," with a designed service life of 15 years, will be used for broadcasting, distance learning, medical services, among others. The satellite is designed to operate at an orbit 36,000 km high from the earth surface.

Millions of Venezuelans watched its launch on Oct. 29, 2008 in southwest China's Sichuan province on television.

Chavez watched the broadcast of the launch at Luepa Station in southern Venezuela's Bolivar state.

During the first year of its operation, "Simon Bolivar" will focus on domestic needs, Hernandez said.

In the first quarter of 2009, 108 towns with problems in getting access to telephone services will benefit from the satellite.

A total of 1,200 satellite land antennas have been set up and another 3,500 will be gradually installed by the end of this year, Science and Technology Minister Nuris Orihuela told Venezolana de Television.

Orihuela said "Simon Bolivar" will be able to cover all the Latin American and Caribbean countries.

The "Simon Bolivar," which is named after a South American independence leader in the 1800s, makes Venezuela the fourth country in Latin America to have a satellite, after Mexico, Argentina and Brazil.

China's Fengyun-3A weather satellite begins weather monitoring (Xinhua Net, 2009-01-12)

China's new generation Fengyun-3A weather satellite started its round-the-clock operations on Monday, according to the China National Space Administration (CNSA).

CNSA director Sun Laiyan said the transfer of the satellite to the China Meteorological Administration marked the birth of China's new generation of polar-orbiting weather satellites.

The Fengyun-3 series of satellites were China's second generation of Polar-Orbiting Meteorological

China Highlights Jan. 2009

Satellites, which were able to provide global 3-dimensional atmospheric thermal image.

Their technology supports short-range weather forecasting and real-time monitoring of meteorological or hydrological disasters. They can also provide data to support research on global climate change.

The Fengyun-3A, together with the Fengyun-1D and Fengyun-2C, D and E, will form a satellite system to offer global around-the-clock weather monitoring.

China to have global satellite navigation system by 2015

(Xinhua Net, 2009-01-19)

China plans to complete its independent global satellite navigation system by launching about 30 more orbiters before 2015, a space technology official said Sunday.

China plans to send 10 navigation satellites into the space in 2009 and 2010, said Zhang Xiaojin, director of astronautics department with China Aerospace Science and Technology Corporation (CASC) told China Central Television (CCTV).

The plan is to establish a global navigation system consisting of more than 30 satellites by the year of 2015. The system will shake off the dependence on foreign systems, Zhang said.

U.S.'s GPS has been widely used for commercial navigation in vehicles, cell phones and other civilian devices in China. Chinese civilian and military users could be guided by their own satellites worldwide after the Beidou becomes the world's fourth edition of global navigation systems.

China launched the first satellite, Beidou Navigation System, into geostationary orbit in Oct. 2000, in an effort to build up its own positioning system independent from the U.S.'s Global Positioning System (GPS), E.U.'s Galileo Positioning System and Russia's Global Navigation Satellite System (GLONASS).

China has sent five positioning orbiters into the space. The current Beidou system only provides regional navigation service within China's territory.

Since Beidou's fifth orbiter launched in April 2007, China has started to upgrade the navigation system to the second generation, code named COMPASS.

Laboratory of Precision Navigation, Positioning and Timing Technology Established in CAS

(CAS, 2009-01-23)

Laboratory of Precision Navigation, Positioning and Timing Technology was newly established in the National Times Service Center (NTSC), CAS.

NTSC had been working on China Area Positioning System (CAPS), and participated in the National Key Basic Research and Development Program of China (973 Program) and the National High Technology Research and Development Program of China (863 Program).

The founding of this key laboratory is expected to enhance China's research in navigation system, especially satellite navigation technology and boost China's navigation industry.

2 Innovation Management

Steady growth in China's science and technology investments in 2007

(People's Daily, 2009-01-09)

According to the National Bureau of Statistics website on January 7, the report on investments in

China Highlights Jan. 2009

science and technology, jointly issued by the National Bureau of Statistics, the Ministry of Science and Technology and the Ministry of Finance, shows that investments in science and technology in China continued to grow steadily in 2007. Total expenditures in research and development (R&D) reached 371 billion yuan, up by 70.7 billion yuan or 23.5% from the previous year and accounted for a record high of 1.49% of China's GDP in 2007.

National fiscal budget in science and technology totaled 211.4 billion yuan, up by 42.5 billion yuan or 25.2% from the previous year. The amount represented 4.25% of total national fiscal expenditures, the highest percentage since 1998.

Enterprises of all types recorded 268.2 billion yuan, research institutions affiliated with government departments 68.8 billion yuan, and colleges and universities 31.5 billion yuan, respectively representing 72.3%, 18.5% and 8.5% of the total R&D expenditures. Enterprises' percentage of total R&D expenditures saw a growth of 1.2 percentage points from the previous year.

Basic research expenditures reached 17.45 billion yuan, up 12% from the previous year. Applied research expenditures totaled 49.29 billion yuan, up 0.8% from the previous year. R&D reached 304.28 billion yuan, an increase of 29% from the previous year. Basic research, applied research and R&D respectively accounted for 4.7%, 13.3% and 82% of the total spending.

R&D in eight industries, including the specialized equipment manufacturing and the pharmaceutical manufacturing industries exceeded 1% of the total revenue earned by the primary business of the industry they are in.

Chinese Academy of Sciences to Invite Overseas Scholars (CAS, 2009-01-13)

The Chinese Academy of Sciences (CAS) said here Monday it would invite thousands of overseas scholars and scientists to work at the academy over the next five years.

The CAS announced the plan only days after a guideline was issued by the General Office of the Communist Party of China Central Committee, calling on state enterprises and academic institutions to attract more leading overseas scientists, especially those on the cutting edge of science and technology.

The recruitment scheme includes 600 leading and "high-level" overseas scientists, Bai Chunli, the CAS vice president, told the academy's annual work meeting.

More than 80 percent of CAS academicians have studied abroad.

Chinese scientists who have studied abroad have long played a crucial role in developing the country's industry, education and national defense programs. Among them were Qian Xuesen, China's father of space technology, Li Siguang, who started China's geomechanics discipline and Deng Jiaxian, a nuclear physicist.

CAS president Lu Yongxiang told the meeting that, in addition to the primary financial support from the government, the academy would seek investment from local departments, companies and foreign organizations.

Lu said that the academy would use practical contributions, instead of academic achievements, as the main criterion for researcher evaluations.

Published work and awards have long been the main sources of recognition for Chinese scientists and researchers, leading to cases of fraud and misconduct.

In the most prominent case, leading scientist Chen Jin was sacked from the prestigious Shanghai

Jiaotong University in 2006 for fabricating data related to a digital computer chip that was developed with state funding.

CAS Plans to Reform Its Evaluation System

(CAS, 2009-01-15)

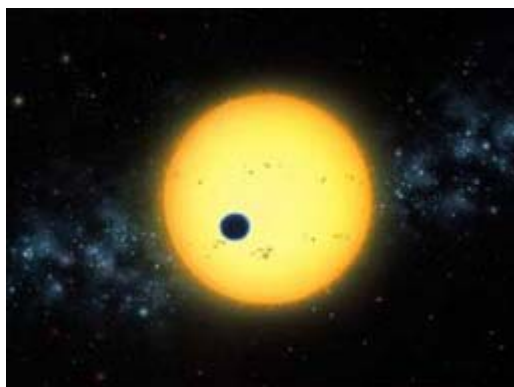
Evaluation on researchers will gradually turn to practical contributions, development trends and level of innovations from number counting of published papers and awards, said Lu Yongxiang, president of Chinese Academy of Sciences, in a conference recently.

In his address, Lu emphasized that, besides publication record based on the peer review tradition, the evaluation system should also take into serious consideration the impact of the researches on the social-economic status of China. He also said researches should be encouraged to turn from their interest-driven researches to important issues more directly related to the construction of a innovation-based country. He hoped that reforms of high-tech transfer mechanism and evaluation system will bring out the creativity from CAS researches.

3 China's International Science Cooperation

Exoplanet Discovered by Chinese-Japanese Joint Project

(CAS, 2009-01-08)



A joint team of National Astronomical Observatories, CAS (NAOC) and Okayama Astrophysical Observatory, Japan, recently discovered an extrasolar planet by using 2.16m astronomical telescope and 1.88m astronomic telescope respectively. The discovery was published by Research in Astronomy and Astrophysics, January 2009.

The planet is a companion to the giant star DH 173416. Scientists from Xinglong station, NAOC and Okayama Astrophysical Observatory, Japan had been observing star DH 173416 since 2004. By adopting the radial velocity method they detected the planet and further confirmed it was a new one. The planetary companion has a minimum mass of 2.7 MJ, an eccentricity of 0.21, a semimajor axis of 1.16 AU and an orbital period of 324 days. It is the first exoplanet ever discovered by the Chinese astronomers using 2.16m astronomical telescope.

The Chinese team is lead by Prof. Gan Zhao of NAOC. The first author is Dr. Yujuan Liu. The scientists expect more similar findings in the future.

Chinese Academy of Sciences honors three foreign scientists

(People's Daily, 2009-01-14)

The Chinese Academy of Sciences (CAS) honored three foreign scientists on Wednesday for their outstanding contributions to facilitating cooperation in science and technology.

CAS president Lu Yongxiang conferred the CAS Award for International Scientific Cooperation on Arima Akito, president of the Japan Science Foundation, Yuen-Ron Shen, professor of physics in the

China Highlights Jan. 2009

University of California at Berkeley, and Michel Che, chair professor of Universite Pierre et Marie Curie.

Arima, a leading theoretical physicist and influential public figure, was nominated as a Nobel Prize candidate for physics in 1984 and 1995.

Since the 1980s, Arima had helped promote academic exchanges between Japan and China, which had strengthened the ability of young Chinese scientists in major scientific initiatives.

Yuen-Ron Shen is a member of the National Academy of Sciences of the United States, the American Academy of Arts and Sciences, and Academia Sinica in Taipei. He is also a foreign member of the CAS.

Shen initiated the annual National Laser Physics Workshop in Qingdao in 1980. His efforts had helped push forward Chinese research in optical physics and related disciplines.

Michel Che, a former president of the International Association of Catalysis Societies, had been dedicated to promoting exchanges between France and China since the early 1980s.

Che was the first foreign scientist to be appointed director of the Academic Committee of the State Key Laboratory of Catalysis in the Dalian Institute of Chemical Physics in 2006.

The CAS award was first introduced in 2007.

Last week, Lothar Reh, professor of Swiss Federal Institute of Technology, and Scott Douglas Rozelle, professor of Institute for International Studies, Stanford University, received the Friendship Award and the International Science and Technology Cooperation Award of China. The government conferred the awards at the nomination of the CAS.

Three Foreign Scientists Received 2008 CAS International Science and Technology Cooperation Award

(CAS, 2009-01-20)



Yuen-Ron Shen, Arima Akito, Lu Yongxiang and Michel Che (from left to right)

The Chinese Academy of Sciences (CAS) honored three foreign scientists on Wednesday for their significant contributions to cooperation in science and technology between CAS and the international science community.

Lu Yongxiang, president of CAS conferred the "2008 CAS Award for International Scientific Cooperation" on Arima Akito, president of the Japan Science Foundation, Yuen-Ron Shen, professor of physics with the University of California at Berkeley, and Michel Che, chair professor of Universite Pierre et Marie Curie.

Arima, a two-time Nobel Prize nominee in 1984 and 1995 played significant role in promoting academic exchange between China and Japan. This world renowned theoretical physicist advanced the Interacting Boson Model Theory, which is still the basis of the nuclear structure theory.

Yuen-Ron Shen, member of the National Academy of Sciences of the United States, the American Academy of Arts and Sciences, is also a foreign member of CAS. He initiated the annual National Laser Physics Workshop in Qingdao in 1980. Shen's efforts had helped push forward Chinese research

in optical physics and related disciplines.

Michel Che, former president of the International Association of Catalysis Societies, went in promoting exchanges between France and China since the early 1980s. He was the first foreign scientist to be appointed director of the Academic Committee of the State Key Laboratory of Catalysis in the Dalian Institute of Chemical Physics, CAS in 2006.

Shanghai Institute of Applied Physics, the Institute of Physics and the Dalian Institute of Chemical Physics of CAS, the three host institutes that cooperated with the award-winning scientists were also honored at the ceremony.

The CAS Award for International Scientific Cooperation was first introduced in 2007 to honor foreign scientists, engineers, and scientific research institutions, developing and managing organizations with distinguishing contributions to Chinese science and technology undertakings. For each year recipients of this honor for are less than 10 people.

Lothar Reh, professor of Swiss Federal Institute of Technology, and Scott Douglas Rozelle, professor of Institute for International Studies, Stanford University, received the Friendship Award and the International Science and Technology Cooperation Award of China recently. The awards were conferred to the two scientists at the nomination of the CAS.

4 Miscellaneous

CAS establishes two mathematical key laboratories

(CAS, 2009-01-03)

Two mathematical key laboratories were established by Chinese Academy of Sciences on 18, December in Beijing.

Hua Loo-Keng Mathematical Key Laboratory will focus on research of mathematical structure and its cross application. The laboratory was named after Hua Loo-Keng, the first director of the Institute of Mathematics, CAS and main founder of the contemporary mathematics in China.

The laboratory is made up by researchers from the Institute of Mathematics and Institute of Applied Mathematics. Zhou Xiangyu, director of the Institute of Mathematics, assumes as director of the laboratory; CAS academician Yang Lo was elected chairman of its scientific committee.

Key Lab of Random Complex Structures and Data Science, AMSS, CAS, undertakes modeling and inference of random complex structure in life sciences, economy & finance and information systems. Also, the lab will carry out researches on fundamental theories and methods of random complex structure and data.

Researchers on related areas and branch of studies from Institute of Applied Mathematics team up to build the lab with Gong Fuzhou, director of the Institute of Applied Mathematics as its director. Academician Ma Zhiming was elected chairman of the lab's scientific committee.

Call for more overseas talents

(People's Daily, 2009-01-05)

More effort should be made to attract outstanding overseas talents to work in China, the Ministry of Education said yesterday.

"High-level talents with overseas education and work experience will greatly strengthen China's

China Highlights Jan. 2009

all-round development, especially as the country is implementing its strategy of invigorating the nation through science, technology and education," Lu Yugang, director of the ministry's talent development office, told China Daily.

The ministry, with the help of other ministries, has increased its financial support for overseas talents and simplified the approval procedure to help them gain "citizen treatment" in China aiming at attracting a group of leading scholars in certain disciplines across the world and forming a group of excellent innovation organizations in China, Lu said.

The ministry has been conducting some exemplary programs to attract scholars to China, he said.

The Chunhui (Spring Bud) Program is one of the programs targeting scholars with doctoral degrees and outstanding records, he said.

Launched in 1996, the program has already funded more than 12,000 individuals and 200 groups of scholars and researchers to serve the country on short-term visits.

Science and Technology Minister Wan Gang is a beneficiary of the program.

Wan was a member of a German automobile research team that got financial support from the program in the late 1990s. He returned to China to work in 2000 and became the president of Tongji University in Shanghai in 2004.

Another of the ministry's programs - the Changjiang Scholars Program, which was set up in 1998 in association with the Hong Kong-based Li Ka-Shing Foundation - has provided financial support to 1,308 leading scholars to devote themselves to the construction of key subjects and academic teams in 115 colleges across China.

The scholars each get a 100,000 yuan annual allowance, research funds and good working conditions provided by the universities.

The Changjiang program has increased the number of scholars to 100 a year since 2004 from 10 in the previous years, and last year began awarding 1-million yuan grants to its top 5 scholars.

More than 98 of the scholars have PhDs and 367 were of foreign nationality, though mostly ethnic Chinese, statistics showed.

Peking University has introduced famous math professor Tian Gang from Princeton University in the United States, while Tsinghua University introduced biological professor Shi Yigong from the same university.

Rao Zihe, 58, president of Nankai University in Tianjin returned to China to work in 1996 after 10 years overseas.

"I gave up my research work at Oxford University and came back to China, attracted by the promising outlook of my motherland and good offers by universities," he said.

China's telecoms sector gets 3G licenses

(CAS, 2009-01-07)

China's telecommunications supervisor on Wednesday issued long-awaited third-generation (3G) mobile phone licenses to three mobile operators, a move that is expected to lead to billions of dollars being invested in building new networks.

The Ministry of Industry and Information Technology (MIIT) said China's biggest mobile operator, China Mobile, was awarded a license for TD-SCDMA, the domestically-developed 3G standard.

The other two main carriers, China Telecom and China Unicom, received licenses for the U.S.-developed CDMA2000 and Europe's WCDMA, respectively.

China Highlights Jan. 2009

The 3G high-speed networks can handle faster data downloads, allowing handset users to make video calls and watch TV programs.

The MIIT also issued 23 regulations on the requirements of 3G network operation, covering such aspects as market competition, consumer rights, user information security, telecommunication charges management and facility building.

The news would also benefit the 3G network equipment and cell phone manufacturers, including ZTE Corp., Wuhan Fingu Electronic Technology Co. and Ningbo Bird Co. Ltd.

The 3G cell phone sales would top 300 billion yuan (44 billion U.S. dollars) during the 2009-2011 period, Sinolink Securities analyst Chen Yunhong forecast.

Shares of these companies declined, however, because of profit taking. ZTE Corp. shares fell 4.03 percent to 27.83 yuan. Wuhan Fingu Electronic Technology Co. was down 2.73 percent to 17.45 yuan. Ningbo Bird Co. Ltd. shed 1.92 percent to 2.55 yuan.

The licenses were issued a day after China Unicom announced it had won government approval to merge with China Network Communications Group Corp. The new China Unicom will hold all the assets and business of the two former companies.

The merger marks the final move in the restructuring of the country's telecommunication industry, which saw six telecom operators rationalize into three: China Mobile, China Telecom and China Unicom.

The State Council, the country's Cabinet, approved the issue of the 3G licenses on Dec. 31. MIIT pledged to issue licenses when the industry restructuring was accomplished.

There could be about 280 billion yuan of direct investment in new networks over the next two years, MIIT Minister Li Yizhong said on Dec. 19.

The network investment would lead to 2 trillion yuan in private-sector investment in the next two or three years, said Chen Jinqiao, deputy chief engineer of the MIIT's telecommunications research institute.

An unidentified official with China Mobile said the market leader would make the development of TD-SCDMA its top priority. China Mobile had already started construction of new networks to cover all cities by 2011.

The government sees the development of 3G networks as an important step in boosting domestic demand and optimizing telecom market competition.

Industry analysts predicted fierce competition for 3G market share among the three carriers.

While WCDMA and CDMA2000 are viewed as having more mature 3G technology that's available around the world, the domestically developed TD-SCDMA has a government pledge of "strong support."

An on-line survey at Sina.com on Wednesday found that 65 percent of the 130,000 respondents said they would choose 3G network service.

China Mobile leads the domestic telecom market with more than 400 million mobile users, two-thirds of the total.

Chen Zuyu Elected Vice President of ISSMGE (CAS, 2009-01-09)

Chen Zuyu, academician of CAS, was elected vice president of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and president of the society's Asian Chapter,

China Highlights Jan. 2009

according to R. Neil Taylor, Secretary General of ISSMGE.

The election makes Chen the first Chinese scholar to assume the leading positions in the society. Chen's term is from October, 2009 till 2013.

Chen, a professor in China Institute of Water Resources and Hydropower Research has been doing research on analysis of engineered slopes stability. He is a consultant to numerous hydropower big projects. He is a recipient of Soil Mechanics and Substructure Engineering Grand Award, one of the top geotechnical awards in China. He was elected chairman of the 10th International Symposium on Landslides and Engineered Slopes in October, 2008.

Three major problems in China's education system

(People's Daily, 2009-01-09)

On January 7, China began to solicit public opinion on its "Outline for National Mid-Term and Long-Term Educational Reform and Development Planning." When interviewed by the press on January 8, Han Qinglin, an expert in strategic issue studies who participated in designing the programme outlines and an inspector of the Education Department of Hebei Province, said that for many years China's outstanding problems in education have boiled down to three aspects.

"The first problem lies in the difficulties in entering school. The most prominent issue is whether the national and local governments can provide enough opportunities for education and whether students can afford schooling."

Han noted that the quality of education is the second problem. This is one of the significant core issues that the programme outlines will address. With the economic and social development of China, the demand for education at a higher level and of better quality is greater than ever.

"The third problem is post-graduation employment." Han believes that whether or not school education can better enable students to find jobs so as to promote economic and social development and to meet the demands of the general public for higher living standards is a deep concern for ordinary people.

Chen Lin Elected President of IACS

(CAS, 2009-01-19)

Chen Lin, academician of Chinese Academy of Sciences was elected president of International Association of Cognitive Science (IACS) recently.

As president of IACS, one of the most important organizations on cognitive science in the world, Chen will preside the 7th International Conference of Cognitive Science (ICCS) in China in 2010. The conference is held by IACS every two years, and provides a platform for cognitive scientists from tens of countries and areas to communicate with each other.

Born in 1945 and graduated from University of Science and Technology of China in 1970, the researcher in The Institute of Biophysics, CAS, is a leading expert on visual perception, experimental psychology, cognitive science, and human brain mapping. He was elected member of Chinese Academy of Sciences in 2003.

Chinese vice premier urges deepening of polar and oceanic research

(People's Daily, 2009-01-21)

Chinese Vice Premier Li Keqiang Tuesday urged scientists to push forward polar and oceanic

China Highlights Jan. 2009

exploration to serve the country's modernization drive and benefit the human society as well.

Li made the remarks after meeting with members of China's 25th Chinese Antarctic expedition team, the 20th oceanic expedition, and scientists working in the country's Antarctic and Arctic stations via telephone.

Li first conveyed greetings to the scientists on behalf of the Communist Party of China Central Committee and the State Council for conducting research despite all kinds of difficulties away from their homeland and families, and inquired about their health and lives.

He said the oceans had become an important source of natural resources, and would play an important role in China's modernization.

Polar and oceanic researches were of great importance to tackle global climate changes, maintain a sustainable development, and exploit and protect the oceanic resources, thus benefiting the human society, Li said.

He urged the scientists to deepen their researches while expanding international cooperation.

Authorities must make full use of the achievements made in the explorations, create good working conditions for the scientists and take good care of the lives of the scientists and their families, he demanded.

Chinese scientist Chen Deliang to become executive director of ICSU

(People's Daily, 2009-01-24)

Swedish Chinese scientist Chen Deliang will become the new executive director of the International Council for Science (ICSU) starting February 1, 2009. He is the first ever Chinese executive director of the ICSU since its founding in 1931.

The ICSU is the most authoritative non-governmental scientific international organization. Its major functions are to identify and study subjects significant to scientific and social development, to organize exchanges and cooperation among interdisciplinary scientists from different countries, and to offer independent and authoritative advice for promoting dialogue amongst the scientific community, governments, social organizations and private enterprises. Currently, members of the ICSU consist of science communities from more than 100 countries and regions. Moreover, an additional 24 national and regional scientific organizations are associate members of the ICSU. It is for this reason that some regard the ICSU as the "United Nations of the scientific community". Renowned global change programmes sponsored by the ICSU include: the International Geosphere-Biosphere Programme (IGBP); the International Human Dimensions Programme on Global Environmental Change (IHDP); DIVERSITAS, an international programme of biodiversity science; and the World Climate Research Programme (WCRP).

Chen Deliang graduated from the department of meteorology, Nanjing University in 1983. After that, he went to Germany to study climatology. In February 1992, he was conferred with a doctorate degree. In 2007, he was appointed as Professor August Rhss (for physical geography/geoinformatics) by Gotesborg University and became the fourth professor to hold the title since Gotesborg's founding in 1891.

Reporters learned that on May 30, 2008, the ICSU announced the appointment of Chen as the new executive director, with his term to begin February 1, 2009.

China Highlights Jan. 2009

China, Germany agree on maglev technology transfer

(Xinhua Net, 2009-01-29)

The deal was signed by Wu Xiangming, president of the Shanghai Magnetic Transportation Development Co. and Hans Christoph Atzpodien, chairman of Germany's Thyssen Krupp Technology. The agreement was among six deals signed by the two sides during Chinese Premier Wen Jiabao's official visit to Germany.

Zhang Ping, minister in charge of the Chinese National Development and Reform Commission, signed an agreement on cooperation in climate protection with Sigmar Gabriel, Germany's environment minister.

The two countries also clinched deals covering cooperation in the car industry, construction of Chinese ecological city Xuzhou, and exchanges between museums of the two countries.

The signing ceremony was witnessed by Merkel and Wen, who arrived in Berlin late Wednesday.

Later Thursday, Wen will attend a forum on Sino-German economic and technical cooperation and deliver a speech.

Cooperation between China and Germany, both export-driving nations, is of special significance amid the ongoing financial and economic crisis, said a joint statement by the two leaders.

Germany is the second leg of Wen's European tour after Switzerland, where he attended the annual meeting of the World Economic Forum (WEF). The trip will also take him to the European Union headquarters, Spain and Britain.

5 Abbreviations

- CAS** - Chinese Academy of Sciences
- MOST** - Ministry of Science and Technology
- CRI** - China Radio International