CPC Central Committee plenum opens

The Seventh Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) opened in Beijing on Wednesday morning, making final preparation for the upcoming 19th CPC national congress.

The session will discuss a draft report to be submitted to the congress by the 18th CPC Central Committee, a draft amendment to the CPC Constitution and a draft work report of the CPC Central Commission for Discipline Inspection (CCDI) to be submitted to the congress.

At a meeting on Sept. 18, the Political Bureau of the CPC Central Committee examined and discussed the three draft documents and agreed to submit them to the Seventh Plenary Session of the 18th CPC Central Committee for further discussion after revisions.

Opinions have been solicited on the draft documents within certain groups of people. And various regions and departments, as well as delegates to the Party's 18th national congress and the newly-elected delegates to the 19th national congress, have put forward opinions and suggestions.

The 19th CPC National Congress, expected to begin on Oct. 18, is a very important meeting to be held when China is at a crucial stage for achieving a moderately prosperous society in an all-round way as well as for the development of socialism with Chinese characteristics.

The five-yearly event will systematically review the Party's work over the past five years since the 18th CPC National Congress in late 2012.

It will summarize historical progress and precious experiences in upholding and advancing socialism with Chinese characteristics gained under the leadership of the CPC Central Committee with Xi Jinping at the core through uniting and leading people of all ethnic groups.

The congress will also thoroughly examine the current international and domestic situation and draw out guidelines and policies that respond to the call of the times.

A new CPC Central Committee and a new CCDI will be elected at the 19th CPC national congress.

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China's Arctic expeditions increase to once a year

China will double the frequency of Arctic expeditions to once a year from this year, the State Oceanic Administration (SOA) announced Tuesday.



Shi Xing'an (2nd R, rear), a member of the Chinese scientific expedition team, is welcomed by his son upon his return in Shanghai, east China, Oct. 10, 2017. China's ice breaker, the Xuelong (Snow Dragon) returned to base in Shanghai Tuesday after 83 days on the Arctic rim, completing its eighth Arctic expedition. (Xinhua/Fang Zhe)

China's ice breaker, the Xuelong (Snow Dragon) returned to base in Shanghai Tuesday after 83 days on the Arctic rim, completing its eighth Arctic expedition.

Rapid changes in the Arctic have an influence on climate, ecology, social and economic development in China, Lin Shanqing, deputy director of the SOA, said at a press conference when explaining why the country will increase the Arctic research.

Arctic shipping routes which have been opened by thawing in the region, are significant to China as the economy depends heavily on maritime transport, Lin said.

The routes are the shortest maritime trade connecting northeast Asia with Europe and North America.

"Our polar explorations will help understanding, use and protection of the Arctic," Lin said. "Melting ice in the Arctic, the most vulnerable area to climate change, has been far beyond expectations. Our knowledge is far from sufficient."

<u>China's FAST telescope finds two</u> <u>pulsars during trial operation</u>

FAST, the world's largest single-dish radio telescope. [Photo/Xinhua]

After one year of trial operation, the China-based FAST, the world's largest single-dish radio telescope, has identified two pulsars, the National Astronomical Observatories of China (NAOC) said Tuesday.

The pulsars, named J1859-01 and J1931-01, are 16,000 light years and 4,100 light years from Earth with rotation periods of 1.83 seconds and 0.59 seconds, respectively.

According to Li Di, chief scientist at the NAOC, the two pulsars were discovered on Aug. 22 and 25 when FAST was drift-scanning the southern galactic plane. The discovery was later confirmed by the Australia-based 64-meter Parkes radio telescope in September.

Peng Bo, deputy director of the FAST project, said three to five years are usually needed for trial operation for a radio telescope as large and complicated as FAST.

"It is truly encouraging to have achieved such results within just one year," said Peng.

Located in a naturally deep and round karst depression in southwest China's Guizhou Province, FAST, which stands for Five-hundred-meter Aperture Spherical Radio Telescope, was completed in September 2016.

The receiving area of FAST is equivalent to about 30 football fields.

FAST's key technical components include the feed cabin, 4,600 triangular panels and an active reflector. With it, astronomers are able to survey hydrogen in the Milky Way and other galaxies, detect thousands of new pulsars and seek out the origin and evolution of the universe.

New fleet of trains help to showcase nation's expertise

The development of, and services offered by, new-generation bullet trains will benefit the government's promotion of the country's high-speed railway technology in the international market, according to officials at China Railway Corp.



A new Fuxing bullet train running between Tianjin and Beijing, prepares to leave the capital.[Photo by Wang Zhuangfei/China Daily]

In a statement published on its website in September, the State-owned railway operator said it plans to design and export bullet trains based on the CR400 Fuxing, or "rejuvenation", model, the nation's newest fleet of trains.

The statement added that the trains will meet the requirements of users overseas and will be competitive in the global market.

As prime examples of China's world-leading expertise, the CR400AF and CR400BF models were put into operation on the Beijing-Shanghai High-speed Railway in late June, running at about 300 kilometers per hour.

On Sept 21, the speed was increased to 350 km/h on the 1,318-km-long line, becoming the world's fastest operational wheeled rail vehicles. Their deployment cut the journey time between the municipalities by 60 minutes, reducing the trip to four and a half hours.

Their development began in 2012 under the Ministry of Railways, the predecessor of CRC, which aspired to manufacture bullet trains with "Chinese standards".

Before Fuxing came into service, trains running on the country's high-speed rail network had been designed and built in accordance with a range of standards in use overseas.

The new models have longer service lives than their predecessors - 30 years compared with 20 - and their streamlined designs allow lower power consumption and more space for every passenger, according to Zhang Bo, a designer at the China Academy of Railway Sciences.

Zhang said the overall design and all of the key parts — such as traction equipment, brakes and the control software — were developed by Chinese engineers.

The trains are equipped with advanced monitoring systems that provide autonomous deceleration in the event of emergencies or malfunctions.

He Huawu, chief engineer at CRC, said the level of technology and the capabilities of the CR400 series meet the highest standards in the world, and will prove major advantages as China seeks to export homemade high-speed railway equipment.