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# SYLLOGE ON CHINA

Focus: Nuclear, Space, Missiles and other Security Issues

An Initiative by Indian Pugwash Society and Centre for Nuclear Issues and Arms Control (MP - IDSA)



INDIAN PUGWASH SOCIETY



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## **Chinese nuclear power operator supplies more electricity**

Xinhua, March 19, 2022

China's leading nuclear power operator, CGN Power Co., Ltd., said on Friday that it sent 201.15 billion kWh of electricity to the power grid in 2021, an increase of 7.86 percent from the previous year. The company said the amount of electricity equals a reduction of 60.85 million tonnes of standard coal consumption, helping cut carbon dioxide emissions by 167.36 million tonnes. The company, which ran 25 nuclear power units in 2021, said its revenues for the whole of last year reached 80.68 billion yuan (about 12.7 billion U.S. dollars), up 14.3 percent year on year.

<https://english.news.cn/20220319/f9947e6d81784ce1a66423ba91806691/c.html>

## **Chinese satellite project aims to give smartphone users fast access to cameras in space**

South China Morning Post, March 18, 2022

China plans to launch a satellite in July to test a new technology that aims to give smartphone users almost instant access to high-definition cameras in space, according to scientists involved in the project. Wang Mi, a professor of remote sensing engineering at Wuhan University and chief designer of the LuoJia-3 01 satellite programme, said the technology would mean an area or event could be live-streamed from orbit to a mobile device on the other side of the planet – with a delay of no more than 10 minutes. That type of service is at present only accessible in the war rooms of some of the most powerful nations.

[https://www.scmp.com/news/china/politics/article/3170968/wuhan-plans-become-chinas-valley-satellites-cities-race-develop?module=perpetual\\_scroll\\_1&pgtype=article&campaign=3170968](https://www.scmp.com/news/china/politics/article/3170968/wuhan-plans-become-chinas-valley-satellites-cities-race-develop?module=perpetual_scroll_1&pgtype=article&campaign=3170968)

## **China Focus: China's space station to support large-scale scientific research**

China Daily, March 18, 2022

China plans to conduct a number of frontier scientific experiments on its Tiangong space station, with the two laboratory modules, Wentian and Mengtian, scheduled to be launched this year, according to the Technology and Engineering Center for Space Utilization under the Chinese Academy of Sciences. The experiments include raising fish, growing vegetables, setting up the most precise clocks in space, developing new materials, studying physical laws and exploring how humans can survive in space for long periods. The scientific experiment facilities to be installed in the two lab modules are currently under development and will be launched into orbit on schedule to support large-scale and multidisciplinary scientific research, said the CSU. Scientists are also planning to establish the world's first space-based cold atomic clock system in the Mengtian lab module, consisting of a hydrogen clock, a rubidium clock and an optical clock. "If successful, the cold atomic clocks will form the most precise time and frequency system in space, which should not lose one second in hundreds of millions of years," said Zhang Wei, director of the Utilization Development Center of CSU.

<https://global.chinadaily.com.cn/a/202203/18/WS6233e33ea310fd2b29e51b02.html>

## **Wuhan plans to become China's 'valley of satellites' as cities race to develop space industry**

South China Morning Post, March 18, 2022

The central Chinese city of Wuhan has vowed to create a 100 billion yuan (US\$15.7 billion) space industry by 2025 and become China's "valley of satellites", joining other cities tasked with developing the sector. Wuhan is offering firms up to 50 million yuan in financial incentives each in projects related to the manufacturing of satellites, rockets and spacecraft, according to a notice from the city government on Wednesday. The amounts for the inland city are modest compared with ambitious plans outlined by other prosperous coastal cities, but the effort suggests a deepening push by China to become a major space power by 2030. China envisions massive constellations of commercial satellites that can offer services ranging from high-speed internet for aircraft to tracking coal shipments.

<https://www.scmp.com/news/china/politics/article/3170968/wuhan-plans-become-chinas-valley-satellites-cities-race-develop>

## **Remote sensing satellite lifted successfully into orbit**

China Daily, March 17, 2022

China launched a remote sensing satellite from the Jiuquan Satellite Launch Center in the north-western Gobi Desert on Thursday afternoon, according to the China Aerospace Science and Technology Corp. The State-owned space contractor said that the Yaogan 34-02 satellite was placed in a preset orbit aboard a Long March 4C rocket that lifted off at 3:09 pm. The satellite will team up with its predecessor, the Yaogan 34-01, which has been in operation for nearly 11 months, as well as with subsequent Yaogan 34-series satellites to be deployed in the future, as part of a space-based network for purposes such as land mapping, urban infrastructure planning, agricultural yield forecasting and disaster relief, the company said in a statement.

<https://www.chinadaily.com.cn/a/202203/17/WS6232ef92a310fd2b29e518f5.html>

## **Chinese, Iranian FMs hold phone talks**

China Daily, March 16, 2022

Chinese State Councilor and Foreign Minister Wang Yi on Tuesday held a phone conversation with Iranian Foreign Minister Hossein Amir Abdollahian. Abdollahian congratulated China on the successful annual "two sessions," and briefed Wang on the latest progress in negotiations of resuming compliance with the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear issue. Iran stands ready to return to the negotiating table as soon as possible and resolve the final outstanding issues through consultation with related parties, so as to work towards a good agreement, said Abdollahian. Iran thanks China for playing a constructive role in the negotiations, he added, voicing hope that China will continue to give support. For his part, Wang said China always supports an early agreement on resuming compliance with the nuclear deal, and is open to and supportive of efforts to this end.

<https://www.chinadaily.com.cn/a/202203/16/WS62315866a310fd2b29e513cd.html>

## **Chinese scientists hail space radar breakthrough**

South China Morning Post, March 16, 2022

A team of Chinese military scientists say they have achieved a breakthrough in laser imaging technology that will allow ground stations to identify and track a target in space with unprecedented accuracy. The results suggest that the radar, developed by Professor Han Fei at the National University of Defence Technology in Anhui province, can take images of a thumb sized object in near-Earth orbit with a resolution of up to 3 millimetres (0.1 inches). This accuracy is two orders of magnitude higher than the best results achieved by similar devices in the United States and other Western countries, according to the researchers.

[https://www.scmp.com/news/china/science/article/3170571/chinese-scientists-hail-space-radar-breakthrough?module=perpetual\\_scroll\\_0&pgtype=article&campaign=3170571](https://www.scmp.com/news/china/science/article/3170571/chinese-scientists-hail-space-radar-breakthrough?module=perpetual_scroll_0&pgtype=article&campaign=3170571)

## **China tests rocket engine for upcoming space lab launches**

China Daily, March 16, 2022

A Chinese high-thrust oxyhydrogen rocket engine has completed a 520-second test in preparation for the upcoming launches of space station lab modules, its maker said on Wednesday. Developed by the China Aerospace Science and Technology Corporation, the engine is designed for the core stage of the Long March-5 carrier rocket series, which will be used to launch two lab modules of China's orbiting Tiangong space station this year. The long-range test, lasting 520 seconds, has verified the reliability of the engine, and there will be more than 20 experimental tasks that the rocket engine will undergo to further test its performance, the company disclosed. China plans to have six more missions, including the launch of the Wentian and Mengtian lab modules, two cargo spacecraft and two crewed spaceships, in 2022 to complete the construction of the space station.

<https://global.chinadaily.com.cn/a/202203/16/WS6231a64fa310fd2b29e514fd.html>

## **China, U.S. agree to 'manage differences' in Yang-Sullivan talk**

China Military Online, March 15, 2022

China and the U.S. should strengthen dialogue and cooperation, properly manage differences and prevent conflict and confrontation under the current international situation, senior Chinese diplomat Yang Jiechi said when meeting with U.S. National Security Advisor Jake Sullivan on Monday in Rome, the capital of Italy. According to the Chinese Foreign Ministry, the two diplomats had "candid, in-depth and constructive communication" on bilateral ties and "the Ukraine issue, the Korean Peninsula nuclear issue, the Iran nuclear issue and the Afghanistan issue."

[http://www.81.cn/jwywpd/2022-03/15/content\\_10141067.htm](http://www.81.cn/jwywpd/2022-03/15/content_10141067.htm)

## **China's nuclear energy goals unlikely to be upended by safety concerns amid Russia's invasion of Ukraine**

South China Morning Post, March 15, 2022

Beijing is expected to stand firm on developing China's nuclear energy capabilities as part of its decarbonisation push, despite security concerns triggered by the Russian invasion of Ukraine. Beijing's nuclear energy push comes as decarbonisation pressures and security concerns sparked by Russia's invasion lead to debate and soul searching among other major nuclear powers. For instance, in response to Russia's invasion, officials in Germany proposed extending the lifespan of its nuclear power plants to ensure energy security, although this suggestion was later turned down. China is expected to build around eight new nuclear reactors a year between last year and 2025 to meet its 2060 carbon-neutral goal, according to its 14th five-year development plan.

<https://www.scmp.com/business/article/3170548/chinas-nuclear-energy-goals-unlikely-be-upended-safety-concerns-amid>

## **China urges Japan to be cautious concerning nuclear sharing talks: spokesperson**

Xinhua, March 14, 2022

China on Monday expressed serious concern over discussions on a nuclear sharing arrangement that would see Japan host U.S. nuclear weapons, and urged Japan to be cautious. Foreign Ministry spokesperson Zhao Lijian made the remarks at a daily press briefing when asked to comment on relevant voices from Japan. As a non-nuclear weapon state party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Japan should earnestly fulfill its international obligations in this regard, Zhao said, noting that China has always opposed the deployment of nuclear weapons by nuclear-weapon states on the territory of other countries. "For historical reasons, relevant movements of the Japanese side in the field of military security have always attracted great attention," the spokesperson said. Zhao said that in recent days, there have been continuous and dangerous comments in Japan that violate the country's three non-nuclear principles.

<https://english.news.cn/asiapacific/20220314/90c2c383f4344dd292b1f02feb34db2c/c.html>

## **In-orbit construction of China's space station going smoothly**

Xinhua, March 12, 2022

Construction work on the core module of China's Tiangong space station is proceeding steadily, the China Manned Space Agency (CMSA) said on Friday. The Shenzhou-13 mission astronauts currently working the project are all in good condition, said the CMSA, adding that they plan to return to Earth in April. The key technologies for the construction of the space station have been fully verified, and the follow-up missions are on course to make solid progress, the CMSA added. Building a space station for large-scale, long-term manned missions is the third step in the "three-step" development strategy of China's manned spaceflight project. Since 2021, the country has successfully carried out five flight missions in the key technology verification phase of its manned spaceflight project.

<https://english.news.cn/20220312/64c5403ea5984db68cd486c42abdb05b/c.html>