

June 20, 2022

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

New Economic Index Reveals U.S. Weakness in Advanced Industries, China Surging; ITIF Report Urges “Moon Shot” Response

Riley Nelson

Information Technology and Innovation Foundation, June 8, 2022

Compared to its competitors in the global economy, the United States is weak in a group of advanced industries that are strategically important for economic and national security, according to a new economic index produced by the Hamilton Center for Industrial Strategy at the Information Technology and Innovation Foundation (ITIF), the world’s leading think tank for science and technology policy. Meanwhile, China has been surging. In a report on its new “Hamilton Index of Advanced-Industry Performance,” ITIF urges Congress and the Biden administration to respond with an economic “moon shot” initiative to increase America’s industrial concentration in advanced sectors by 20 percentage points in a decade.

<https://itif.org/publications/2022/06/08/new-economic-index-reveals-us-weakness-in-advanced-industries-itif-urges-moon-shot-response/>

Chinese nuclear force development impressive; new weapons commissioned: Defense Minister

Global Times, June 12, 2022

Having developed its capabilities for over five decades, China’s nuclear force has seen impressive progress, with new weapons and the equipment displayed at the National Day military parade in 2019 all commissioned to the Chinese armed forces, said State Councilor and Defense Minister General Wei Fenghe. Since the building of the Chinese nuclear force, China has developed its capabilities for over five decades, and it is fair to say that there has been impressive progress, said Wei, when asked about China’s nuclear capabilities development after his speech at the Shangri-La Dialogue in Singapore. “Let me be frank. China’s policy on nuclear power is consistent. We use it for self-defense, we will not be the first to use nuclear power, and we develop nuclear capabilities with an ultimate goal of eliminating nuclear weapons. We develop nuclear capabilities to protect the peaceful hard work of the Chinese people and to protect our country from the scourge of war, particularly nuclear war,” Wei said.

<https://www.globaltimes.cn/page/202206/1267860.shtml>

China fires back at US claims of aggression as it admits to developing new weapons

Kathrin Hille and Demetri Sevastopulo

Financial Times, June 12, 2022

China’s defence minister has strongly pushed back against US accusations of aggression, and sought to present Beijing as a responsible power and western countries as outsiders undermining stability in Asia.

The stance came as Beijing tried to avoid a further escalation in tensions over Taiwan, after a meeting between General Wei Fenghe and US defence secretary Lloyd Austin that was dominated by discussions about the island that were described as “frank, positive and constructive”. The FT reported last year that the PLA had tested a nuclear-capable hypersonic weapon that flew around the world and fired a missile as it flew over the South China Sea.

<https://www.ft.com/content/8e3fbe0e-e47e-4f34-a3bf-0074341998cd>

U.S. think tank sees China's tech as 'scary.' That's not healthy

Gong Zhe

CGTN, June 12, 2022

In another attempt to create a false "China threat" hype, a Washington D.C.-based think tank has said China's technology sector is "scary" and that the U.S. is losing ground in the field. The think tank, Information Technology and Innovation Foundation (ITIF), referred to the movie "Jaws" to describe China's rise in a tweet. ITIF said they assessed the global technology industries by nations instead of companies, with a self-compiled "Hamilton Index of Advanced-Technology Performance."

<https://news.cgtn.com/news/2022-06-12/U-S-think-tank-sees-China-s-tech-as-scary-That-s-not-healthy-1aOof5Bpi4o/index.html>

China develops AI that ‘can use deception to hunt satellites’

Stephen Chen

South China Morning Post, June 13, 2022

A research team in China said that an anti-satellite artificial intelligence system has mastered the art of deception in a simulated space battle. In the experiment, the AI commanded three small satellites to approach and capture a high-value target, repeating the exercise thousands of times. Eventually the targeted satellite learned to detect the incoming threat and fired up powerful thrusters to evade the pursuit. But it was then lured into a trap after the AI ordered the three hunters to veer off their original trajectory, as if giving up the pursuit.

<https://www.scmp.com/news/china/science/article/3181546/china-develops-ai-can-use-deception-hunt-satellites>

World headed for new era of nuclear rearmament, SIPRI says

South China Morning Post, June 13, 2022

The number of nuclear weapons in the world is set to rise in the coming decade after 35 years of decline as global tensions flare amid Russia’s war in Ukraine, researchers said. The nine nuclear powers – Britain,

China, France, India, Israel, North Korea, Pakistan, the United States and Russia – had 12,705 nuclear warheads in early 2022, or 375 fewer than in early 2021, according to estimates by the Stockholm International Peace Research Institute (SIPRI). Meanwhile several countries, including China and Britain, are either officially or unofficially modernising or ramping up their arsenals, the research institute said. In terms of overall numbers, China comes third with 350, followed by France with 290, Britain with 225, Pakistan with 165, India with 160 and Israel with 90.

<https://www.scmp.com/news/world/europe/article/3181446/peace-researchers-say-worlds-nuclear-arsenals-may-soon-grow-light>

China boosting nuclear arsenal, Pakistan leads India in warheads: Sipri

Rajat Pandit

The Times of India, June 14, 2022

China is undertaking a “substantial expansion” of its nuclear weapons arsenal, which satellite images show includes the construction of more than 300 new missile silos, even as Pakistan also continues to be slightly ahead of India in the number of nuclear warheads. China has an estimated 350 nuclear warheads, with new mobile missile launchers and another submarine becoming operational over the last one year, while Pakistan has 165 and India 160, as per the latest assessment of the Stockholm International Peace Institute (SIPRI).

<https://timesofindia.indiatimes.com/world/china/china-boosting-nuclear-arsenal-pakistan-leads-india-in-warheads-sipri/articleshow/92190505.cms>

Senior Chinese diplomat Yang Jiechi warns US not to have miscalculation or illusion on Taiwan question

Global Times, June 14, 2022

In talks with National Security Advisor of the US Jake Sullivan in Luxembourg, senior Chinese diplomat Yang Jiechi said the US shouldn't have miscalculation or illusion on the Taiwan question and warned that the Taiwan question, if inappropriately handled, will have a disruptive impact. The two held "frank, deep and constructive" dialogue and communication on questions that concern both, agreeing to strengthen communication and dialogue, reduce misunderstanding and miscalculation, and properly manage differences. Both of them said it is necessary and beneficial to keep communication channels open. Yang noted that US President Joe Biden had repeatedly stated that the US has no intention to seek a new Cold War or change China's system, that the revitalization of US alliances is not anti-China, that the US does not support "Taiwan independence," and that it is not looking for conflict or confrontation with China.

<https://www.globaltimes.cn/page/202206/1268054.shtml>

US bill won't stop China's development, will backfire: official

Global Times, June 14, 2022

A spokesperson for China's Foreign Ministry blasted a US Congress bill that aims to restrict investments into China's tech sector as undermining international trade order and global supply chains, saying the move won't stop China's development as it was intended. The US will "very likely" pass a bill that aims to bar billions of dollars worth of investment in China's high-tech sectors, including semiconductors and artificial intelligence (AI), extending the US' push for a tech decoupling from China, according to media reports and analysts. However, by proposing misplaced curbs on normal trade and business ties with China, the US politicians will not succeed in blocking China's development. Rather, they will be surrounding the US with walls and costing the US itself opportunities to grow, Chinese Foreign Ministry spokesperson Wang Wenbin said at a regular press briefing.

<https://www.globaltimes.cn/page/202206/1268107.shtml>

China's deep space exploration laboratory starts operation

CGTN, June 14, 2022

China's deep space exploration laboratory has started operation, the China National Space Administration (CNSA). Jointly established by the CNSA, Anhui Province and the University of Science and Technology of China, the laboratory is expected to carry out science and technology research focusing on major projects in the field of deep space exploration, according to the CNSA. Headquartered in Hefei, capital of Anhui Province, it has completed various preparatory work and entered a new stage of substantial operation and comprehensive construction, according to the CNSA.

<https://news.cgtn.com/news/2022-06-14/China-s-deep-space-exploration-laboratory-starts-operation-1aRCvSfGaGc/index.html>

China's Nuclear Buildup Violates the NPT

Thomas D. Grant

The National Interest, June 14, 2022

At an international security conference in Singapore on June 12, Japanese prime minister Fumio Kishida bemoaned China's secrecy about its nuclear weapons buildup. His comments came only weeks after Secretary of State Antony Blinken publicly urged Beijing to work with Washington to promote nuclear nonproliferation. What's odd is that neither mentioned the Nuclear Nonproliferation Treaty (NPT). That's a mistake. Certainly, as China races to carry out the largest nuclear weapons build-up since the end of the Cold War, it's time members of the Nuclear Nonproliferation Treaty (NPT) hold Beijing to its NPT obligations. These include entering into good-faith talks like those with Russia that helped bring an earlier arms race to a close.

<https://nationalinterest.org/feature/china%E2%80%99s-nuclear-buildup-violates-npt-202922>

Elimination of nuclear weapons an urgent need, UN chief warns

South China Morning Post, June 16, 2022

The United Nations Secretary General Antonio Guterres said that there is an “urgent need” for a total ban on nuclear weapons amid heightened tensions stemming from Russia’s invasion of Ukraine, with Japan able to play an important role in achieving that goal. There is also disquietude over efforts by China and North Korea to expand their nuclear capabilities, with the United States warning Pyongyang may conduct its seventh nuclear test soon.

<https://www.scmp.com/news/world/article/3181978/elimination-nuclear-weapons-urgent-need-un-chief-warns>

China’s military expansion is reaching a dangerous tipping point

Josh Rogin

The Washington Post, June 16, 2022

In recent years, Chinese President Xi Jinping has said that China plans to achieve military parity with the United States in Asia by 2027. As the Chinese military advances in both technology and territorial presence, leaders in the People’s Liberation Army are now openly threatening to attack Taiwan and promising to fight anyone who attempts to intervene. Beijing is speeding up its plans, and the United States risks falling behind. China is building the capability to use nuclear blackmail to deter a U.S. intervention if it invades Taiwan, following Russia’s model. China’s regional military presence is expanding, including a secret naval base in Cambodia and a secret military cooperation agreement with the Solomon Islands. China has developed new technologies, including hypersonic missiles and antisatellite lasers, to keep the U.S. military at bay in a Taiwan scenario. And now, China no longer recognizes the Taiwan Strait as international waters.

<https://www.washingtonpost.com/opinions/2022/06/16/china-expansion-indopacific-asia-taiwan-xi-aquilino/>

How China’s national computing network will be a game changer

Arjun Gargeyas

South China Morning Post, June 16, 2022

With data generation at an all-time high, nations now rely on high-speed computational processing capacity. From scientific research and engineering to logistics management and manufacturing, and from business processes and product development to military hardware, computing power has become a key factor in a state’s technological growth. China’s rise as a global computing powerhouse can be traced back to 2001 and the state’s emphasis on research to develop its own advanced systems. Beijing’s actions have focused on leveraging its home-grown resources, along with private-sector investment, to produce top-class research and development, and machines with globally competitive computing capabilities.

<https://www.scmp.com/comment/opinion/article/3181654/how-chinas-national-computing-network-will-be-game-changer>

Smaller nuclear warheads make nuclear terrorism realistic. China, US, Russia must sit together

Shyam Saran

The Print, June 16, 2022

The US and Russia still have the largest arsenals, over 90% of the global total but China is catching up fast. Neither Moscow nor Washington believe that bilateral arms deals will enhance their security unless China joins the negotiations. In the subcontinent, India is reluctant to engage in nuclear arms control with Pakistan because China is its main adversary. China, on the other hand, has structured its nuclear deterrent with the US in mind. It is only in a multilateral format that these differing threat perceptions can be addressed and reconciled.

<https://theprint.in/opinion/smaller-nuclear-warheads-make-nuclear-terrorism-realistic-china-us-russia-must-sit-together/998699/>

China feels slight unease in intimidating Japan with Russia

Katsuji Nakazawa

Nikkei Asia, June 16, 2022

Since last year, China and Russia have been conducting joint military activities in the seas and in the airspace near Japan. Japanese Defense Minister Nobuo Kishi expressed grave concerns about the operations directly to his Chinese counterpart, Wei Fenghe. But while Beijing continues to flex its muscle at Tokyo, including flying strategic bombers with Russia near Japan, Moscow's struggles in Ukraine are causing a dilemma for China. Beijing does not want the international community to conclude that it is united militarily with Russia.

<https://asia.nikkei.com/Editor-s-Picks/China-up-close/Analysis-China-feels-slight-unease-in-intimidating-Japan-with-Russia>

US conveyed concerns over N. Korean nuclear weapon test to China

The Korea Times, June 17, 2022

The United States has discussed with China the growing concerns over a possible North Korean nuclear weapon test, U.S. national security advisor Jake Sullivan said. He also reiterated U.S. concerns over what will be North Korea's seventh nuclear test. "On North Korea, we have expressed our concern that North Korea is preparing to conduct another nuclear test. We have said that publicly. We have communicated that to China," Sullivan said in an online discussion session hosted by the Center for a New American Security (CNAS), a Washington-based think tank. The remarks come after Sullivan met with Yang Jiechi, head of the Chinese Community Party's Foreign Affairs Bureau, in Europe.

http://www.koreatimes.co.kr/www/nation/2022/06/103_331185.html

China's Lessons from Russia's War

Kevin Rudd

Project Syndicate, June 17, 2022

Following Russia's invasion of Ukraine on February 24, two views quickly emerged in the West about what lesson China would take from the war. The first suggested that NATO's failure to deter Russia – or to defend Ukraine directly – would inspire China to advance the timetable for a planned invasion of Taiwan, or even to capitalize on the chaos brought about by the war to attack the island immediately. But after Russia's military ran into significant and unexpected challenges early on, an alternate line of analysis emerged suggesting that China has now been significantly deterred from ever attempting to take Taiwan.

<https://www.project-syndicate.org/onpoint/chinas-lessons-from-russias-war-by-kevin-rudd-2022-06?barrier=accesspaylog>

China launches EM catapults-equipped 3rd aircraft carrier in Shanghai

Global Times, June 17, 2022

China launched the country's third aircraft carrier and also its second domestically developed one in Shanghai, a move experts said is a milestone for the vessel's construction and future commissioning. Having a displacement of more than 80,000 tons, the carrier, named Fujian, is the country's first one equipped with electromagnetic catapults and arresting devices. As a key landmark in the Chinese People's Liberation Army (PLA) Navy's pursuit to become a blue-water navy, the third carrier is larger, more powerful and more advanced than the previous two, making it the first Chinese aircraft carrier to come close to rival its US counterparts thanks to technologies it uses like catapults, analysts said.

<https://www.globaltimes.cn/page/202206/1268368.shtml>

China's commercial space telescope completes all-sky optical survey

Xinhua, June 17, 2022

China's commercial space telescope Yangwang-1 has completed an optical survey of the whole sky, according to its developer. The telescope, launched into orbit from the Taiyuan Satellite Launch Center in northern Shanxi Province on June 11, 2021, is developed by Shenzhen-based Origin Space Technology Co., Ltd. for asteroid resource exploration and research. During its stay in orbit, Yangwang-1 carried out sky survey observation, atmospheric luminous observation, night remote monitoring and asteroid observation, according to Su Meng, founder and CEO of Origin Space.

<https://english.news.cn/20220617/7f2d5be123d74dba820f8f1765a54a0b/c.html>

China Tests Tech That Could Beam Solar Power From Space to Earth

Bloomberg, June 18, 2022

Chinese researchers have successfully tested a full-system model of technology that could one day wirelessly transmit solar power from outer space to Earth. A model power station at Xidian University in Shaanxi province captures sunlight high above the ground and converts it into microwave beams. It then transmits through the air to a receiver station on the ground, where it can be converted back to electricity. While the model only sends the energy 55 meters through the air, the researchers hope the technology could one day be expanded to send power from orbiting solar panels to Earth.

<https://www.bloomberg.com/news/articles/2022-06-17/china-tests-tech-that-could-beam-solar-power-from-space-to-earth>

China holds latest antiballistic missile technical test, 'proves reliability amid improving technologies'

Liu Xuanzun

Global Times, June 19, 2022

China carried out a land-based, mid-course antiballistic missile (ABM) technical test, with analysts saying the successful interception proved the reliability of the country's antiballistic missile umbrella at a time when technologies on both ballistic missiles and antiballistic missile interceptors are improving. Conducted at night within the Chinese border, the test reached its desired objective, China's Ministry of National Defense announced in a press release late on Sunday. The test is of defensive nature and is not aimed at any country, the Chinese Defense Ministry said. It marks a consecutive year China has conducted this kind of test. A similar test was held in February 2021, according to an announcement of the Chinese Defense Ministry at the time.

<https://www.globaltimes.cn/page/202206/1268502.shtml>

Chinese ground-based midcourse antiballistic missile test

CGTN, June 20, 2022

The ground-based midcourse antiballistic missile flight has three phases: the boost phase when the rocket booster pushes the missile to the sky, the midcourse phase where missile travels outside of the atmosphere, and the terminal phase where the missile re-enters the atmosphere and hits the target. There are pros and cons of intercepting an intercontinental missile in different phases while it's relatively easy to intercept a ballistic missile in the boost phase as it's close to the ground and still speeding up. Intercepting a ballistic missile in the midcourse phase can be quite challenging as the missile travels with nuclear warheads at a high altitude outside of the atmosphere at a very high speed, the Global Times quoted experts as saying. Intercepting it in terminal phase is not easy either as the missile travels at a high speed, they added.

<https://news.cgtn.com/news/2022-06-20/China-conducts-ground-based-midcourse-antiballistic-missile-test-1b0BnouwkmY/index.html>

The flaws in China's nuclear power drive

L V Krishnan

Hindustan Times, June 20, 2022

Under Mao Zedong, China's focus was fully on nuclear weapons. Buoyed by the success in nuclear weapon production, in 1970 Zhou Enlai proposed a turn to nuclear electricity generation. That led to some preliminary work soon after. Serious attempts to design a large Pressurised Reactor (PWR) that require enriched uranium began after the adoption of the 'reform and opening up' policy in 1978. In parallel, for quick results, simultaneously China initiated negotiations with France to build two large PWRs. These became operational in 1986. China then ordered more reactors from Canada, Russia and the United States (US). Now, out of a total of about 60 reactors, China has built 40 reactors on its own.

<https://www.hindustantimes.com/ht-insight/international-affairs/the-flaws-in-china-s-nuclear-power-drive-101655711719425.html>

*Sylloge on China is compiled by Mr. Niranjan C. Oak with inputs
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