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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



## **U.S. Navy gathers best destroyers in Japan to hunt Chinese submarines**

Ken Moriyasu

Nikkei Asia, 10 May 2022

Off the coast of Japan's glittering capital, the U.S. Navy recently dropped a hint about its shifting strategy in Asia. In March, the Navy and the Japan Maritime Self-Defense Force conducted a torpedo drill in Tokyo Bay for the first time. From the air, an MH-60R helicopter launched an inert training torpedo into Japanese waters, simulating an attack on a submarine. Previously, all similar torpedo exercises had been conducted off the shores of San Diego. The drill came as the U.S. Navy quietly reshuffles its ship roster in Japan, bringing newer and more capable vessels closer to the Taiwan Strait and reflecting the changing priorities of its global mission. Since last summer, five Arleigh Burke-class guided-missile destroyers have arrived in Yokosuka -- the largest overseas U.S. naval installation in the world, about an hour's drive south of Tokyo. They have replaced ships such as the USS John S. McCain and USS Curtis Wilbur, which had been forward-deployed to Japan for a quarter of a century.

<https://asia.nikkei.com/Spotlight/Asia-Insight/U.S.-Navy-gathers-best-destroyers-in-Japan-to-hunt-Chinese-submarines>

## **A Chinese team has tested an engine for hypersonic flight – powered by explosions**

Stephen Chen

South China Morning Post, 11 May 2022

Researchers in southwest China say their air-breathing engine – driven by the explosions of cheap hydrocarbon fuel – achieved stable operation during a simulated test flight at hypersonic speed. This approach can wreck an engine because the explosions release a huge amount of energy in a sudden, uncontrollable way. But the team at the China Aerodynamics Research and Development Centre in Mianyang, Sichuan province say their rotating detonation engine could power a plane or missile at five times the speed of sound or faster by producing thousands of explosions per second.

<https://www.scmp.com/news/china/science/article/3177336/chinese-team-has-tested-engine-hypersonic-flight-powered>

## **China warns US against attempts to dominate outer space**

Amber Wang

South China Morning Post, 11 May 2022

China has warned against attempts to dominate outer space or gain an advantage under the guise of arms control. In a speech to a United Nations conference on outer space on Tuesday, Li Song, China's ambassador for disarmament affairs, said the origin of the arms race in outer space, which he called a "Sword of Damocles", lies in the attempts of superpowers to dominate outer space. The

US recently pledged to ban anti-satellite missile tests, but Li warned against using arms controls to secure an advantage over other countries.

<https://www.scmp.com/news/china/diplomacy/article/3177355/china-warns-us-against-attempts-dominate-outer-space>

## **Over 100 aircraft drill sorties from carrier Liaoning in 6 days near Japan, Taiwan island ‘demonstrate readiness’**

Liu Xuanzun,

Global Times, 11 May 2022

Japanese Defense Minister Nobuo Kishi said that the aircraft carrier Liaoning of the Chinese People's Liberation Army (PLA) Navy hosted more than 100 aircraft sorties within six days when recently conducting drills near Japan and the island of Taiwan, a figure that analysts said demonstrated the carrier's high level of training, and showed that the carrier can do even better in real combat. Chinese fighter jets and helicopters were confirmed to have taken off from and landed on the aircraft carrier Liaoning far more than 100 times from May 3, when the Chinese carrier group was operating in waters about 160 kilometers southwest of Okidaitojima and 150 south of Ishigaki Island, Kishi said in a press conference. The move could be part of the Chinese military's efforts to boost the carrier's operational capability and enhance its ability to carry out operations in more distant maritime and aerial areas, Kishi said, noting that the Japanese government "had to monitor the situation with concern" because it happened "near Japan's southwestern islands and Taiwan."

<https://www.globaltimes.cn/page/202205/1265387.shtml>

## **Foreign reports on PLA Navy’s new submarine ‘speculative and biased’**

Liu Xuanzun,

Global Times, 11 May 2022

Foreign media reported that China recently launched what seems to be a new or upgraded class of nuclear-powered attack submarine, citing analyses based on satellite images. Chinese experts said that the reports are only speculative, and the West, especially the US, should not apply double standards on China's normal national defense development, as the US has been frequently sending nuclear-powered submarines near China and the newly established AUKUS alliance which provides Australia with nuclear-powered submarines for the first time also aims to confront China. Commercial satellite images taken from April 24 to May 4 confirm that a probable nuclear-powered attack submarine was in dry dock at a shipyard in Northeast China, and the boat was later seen mostly submerged in the same place after the dry dock was flooded, Reuters reported.

<https://www.globaltimes.cn/page/202205/1265408.shtml>

## **Superpowers promising not to seek hegemony primary responsible for space security, Chinese diplomat urges**

Global Times, 11 May 2022

The primary responsible behavior in space should have superpowers to promise not to seek hegemony, nor dominate the outer space, a senior Chinese diplomat said, elaborating China's views on how to protect space security and avoid arms race in space. Though the Cold War has been over for 30 years already, some individual countries still stick with the Cold War mentality and seek unilateral strategic advantages in space, which brings severe negative impact on global strategic stability and long-lasting threat on space peace, Li Song, China's ambassador for disarmament affairs, said. From a historical and practical point of view, the origin of the arms race in outer space lies in the attempts of superpowers to dominate outer space, that's like a Sword of Damocles hanging over the outer space, Li said. Li said that no country should engage in great power competition, bloc politics and camp confrontation in space, instead, countries should uphold the concept of building a community with a shared future for mankind and respond to threats to space security through cooperation. Whether or not to support the negotiation of a new outer space control treaty is the touchstone for measuring whether a country's outer space behavior is responsible, Li noted.

<https://www.globaltimes.cn/page/202205/1265333.shtml>

## **What food does China's cargo craft Tianzhou-4 deliver to space?**

Xinhua, 11 May 2022

China's cargo spacecraft Tianzhou-4 is delivering supplies for its space station under construction, including food for Chinese astronauts. They include nearly 50 kinds of food, such as Bazhen chicken, corn with pine nuts, braised beef with potatoes, developed by Yongda Food in Hebi City, central China's Henan Province. Yongda Food has cooperated with China Astronaut Training Center, and more than 100 products developed by the company are listed in the astronauts' cookbook. Yongda Food has completed the space food supply tasks from Shenzhou-8 to Shenzhou-13 spacecrafts. This is the seventh time that the company's space food has been sent into the space.

<https://english.news.cn/20220511/0ec01875a93c497c8a8bcaaa5f00629e/c.html>

## **Tank detachment conducts live-fire assessment**

China Military Online, 11 May 2022

A tank detachment of a combined-arms brigade under the PLA 82nd Group Army conducted a live-fire assessment to examine the tank crews' capability with multiple subjects, including target searching, evaluation of battlefield situation and target striking.

[http://eng.chinamil.com.cn/view/2022-05/11/content\\_10154257.htm](http://eng.chinamil.com.cn/view/2022-05/11/content_10154257.htm)

## **Kwasi Kwarteng seeks US investment for UK nuclear plants to end reliance on China**

Edward Malnick

The Telegraph, 14 May 2022

The Business Secretary is to fly to the US to drum up American investment in new nuclear plants amid concerns that the UK is too reliant on China for help building reactors in Britain. Kwasi Kwarteng is expected to hold talks with Jennifer Granholm, the US energy secretary, in Washington DC, where a Whitehall source said the minister was “keen to strengthen cooperation with the Americans on energy security”. Last month Boris Johnson and Mr Kwarteng announced plans for a massive expansion of nuclear energy in Britain as part of the country’s new energy security strategy that followed Vladimir Putin’s invasion of Ukraine. Mr Kwarteng is said to be concerned that Britain has become too reliant on two major players in the nuclear market – China General Nuclear, a Chinese state-owned energy giant, and EDF, which is owned by the French state.

<https://webcache.googleusercontent.com/search?q=cache:KvcjeN45bjAJ:https://www.telegraph.co.uk/politics/2022/05/14/kwasi-kwarteng-seeks-boost-us-investment-nuclear-end-reliance/&hl=en&gl=in&strip=1&vwsrc=0>

## **Satellite images of Chinese nuclear submarine being built prompt speculation of vertical launch system**

Minnie Chan

South China Morning Post, 14 May 2022

Commercial satellite images have shown China is building a new and bigger nuclear submarine with a more advanced propulsion system than its active Type 093 variants, raising speculation that the country will introduce a next-generation nuclear sub with a vertical launching system. However, an expert said the new vessel could be an experimental platform to try out the country’s new-generation ship-borne nuclear reactors that are designed for future submarines – bigger nuclear subs equipped with ballistic missiles – and even future aircraft carriers. According to experts, the deliberate disclosure of the new sub could be seen as a warning to the Americans, who are selling more advanced and offensive weapons to Taiwan.

<https://www.scmp.com/news/china/military/article/3177644/satellite-images-chinese-submarine-under-construction-prompt>

## **War games predict China could resort to nuclear weapon if it invades Taiwan**

Taiwan News, 14 May 2022

China could end up dropping a nuclear bomb if it decided to invade Taiwan, according to the latest cross-strait war game exercise. The war game took into account the example of Russia’s failed

invasion of Ukraine and was run by the Washington-based Center for a New American Security (CNAS), former Pentagon officials, U.S. lawmakers, and the broadcaster NBC. The original premise of the operation was that China would try to achieve a swift decapitation of Taiwan's leadership. In doing so, it would preemptively attack U.S. bases in Japan and Guam. The U.S. would likely respond by hitting Chinese ports and mobilizing its allies, in the war-game scenario. This would lead to further escalation and China taking extreme measures.

<https://www.taiwannews.com.tw/en/news/4538470>

## **Frigates conduct maritime combat drill**

China Military Online, 15 May 2022

In early May, frigates Enshi (Hull 627) and Wuzhou (Hull 626) assigned to a frigate flotilla of the navy under the PLA Southern Theatre Command conducted a high-intensity multi-subject combat training exercise at a sea area to verify the troops' operational commanding and coordinating abilities in realistic battlefield scenario. During the exercise, which lasted for couple of days, the two frigates practiced all-times and all-dimensional offense and defense training items including the air-defense, main gun shooting, destroying floating mines in fast-changing battlefield scenarios. Meanwhile, the items of vessel towing, ship-based chopper landing and take-off and underway replenishment were also embedded in the whole course of the exercise.

[http://eng.chinamil.com.cn/view/2022-05/15/content\\_10155247.htm](http://eng.chinamil.com.cn/view/2022-05/15/content_10155247.htm)

## **Satellite photo shows possible new Chinese nuclear submarine able to launch cruise missiles**

Mike Yeo

Defence News, 16 May 2022

A submarine seen in a satellite photo of a Chinese shipyard shows what could be a new class or subtype of a nuclear-powered attack sub with a new stealthy propulsion system and launch tubes for cruise missiles. The satellite photo of the shipyard at Huludao in Liaoning province, northern China, which was provided to Defense News by Planet Labs, was taken May 3 and shows a submarine on a drydock. The unidentified boat's presence at the yard was first noted in an April 29 satellite image by geospatial intelligence outfit AllSource Analysis. The organization said the submarine is possibly a new class undergoing construction by China. The submarine has two distinct patches of green coloring on its hull immediately behind its conning tower, while a cruciform rudder arrangement and a possible shrouded propulsion system are seen.

<https://www.defensenews.com/naval/2022/05/16/satellite-photos-show-possible-new-chinese-nuclear-submarine-able-to-launch-cruise-missiles/>

## **Moves by Russia, China, North Korea rekindle nuclear concerns**

Christina Pazzanese

The Harvard Gazette, 16 May 2022

Russia's threats to use nuclear weapons in Ukraine along with China's missile system expansion and North Korea's recent accelerated pace of missile testing have revived concerns about global arms security. During a talk Wednesday, Ambassador Bonnie Jenkins, Under Secretary of State for Arms Control and International Security, spoke to Matthew Bunn, James R. Schlesinger Professor of the Practice of Energy, National Security, and Foreign Policy at Harvard Kennedy School and co-principal investigator of the Managing the Atom Project, about the approaches that the U.S. is taking to the changing landscape of nuclear threats in Russia, China, and North Korea. Despite Russia's explicit and implicit threats, the U.S. has seen no signs so far that Russia has taken concrete steps toward deploying nuclear weapons. The U.S. and allies such as France and the U.K. have been cautious in their public responses in an effort to tamp down, or at least not escalate, Russia's rhetoric. But that doesn't mean such talk is not being taken seriously, she said.

<https://news.harvard.edu/gazette/story/2022/05/moves-by-russia-china-north-korea-rekindle-nuclear-concerns/>

## **China, India and Pakistan: Tenuous Stability Risks Nuclear War**

Daniel Markey, Andrew Scobell, Vikram J. Singh

United States Institute of Peace, 17 May 2022

Over the past decade, long-standing disputes between the nuclear-armed states of Southern Asia have repeatedly veered into deeper hostility and violence. These regional developments reflect and reinforce new and significant geopolitical shifts, starting with the global strategic competition between China and the United States. In Southern Asia, relations between the United States and Pakistan have frayed even as U.S.-India and China-Pakistan ties have strengthened. The region now faces deepening and more multifaceted polarization. Global competition adds fuel to regional conflict and reduces options for crisis mediation. To help keep the peace in Southern Asia, the United States should undertake efforts in three domains: core regional disputes, strategic regional stability and potential crises involving nuclear-armed actors in the region.

<https://www.usip.org/publications/2022/05/china-india-and-pakistan-tenuous-stability-risks-nuclear-war>

## **Chinese FM urges Japan to immediately stop construction of nuclear wastewater discharge project**

Global Times, 17 May 2022

China's Foreign Ministry urged the Japanese government to immediately terminate the construction of the nuclear-contaminated wastewater discharge project near the Fukushima nuclear

power plant by Japan's Tokyo Electric Power Company (TEPCO), stressing that countries across the Pacific have expressed serious concern and firm opposition to Japan's wastewater-dumping decision. Chinese Foreign Ministry Spokesperson Wang Wenbin noted that it is irresponsible for Tokyo Electric Power Company to push ahead with the project of dumping nuclear-contaminated wastewater into the sea in disregard of the serious concerns of local residents and the international community. Japan's Nuclear Safety Commission (NSC) announced that it will discuss a draft review of the Tokyo Electric Power Company's plan to discharge nuclear-contaminated wastewater from the Fukushima nuclear plant into the sea at its regular meeting on May 18. If agreed, the plan could be approved after a process including soliciting public opinions.

<https://www.globaltimes.cn/page/202205/1265871.shtml>

## **Chinese scientists work on hypersonic missile that can hit moving car**

Stephen Chen

South China Morning Post, 17 May 2022

China is developing a heat-seeking hypersonic weapon that will be able to hit a moving car at five times the speed of sound, according to scientists involved in the project. The research team, led by Yang Xiaogang from the PLA Rocket Force University of Engineering in Xian, said “important progress” had been made towards solving the main problem of how to pinpoint a moving target at extreme speeds. Yang and his colleagues from the university’s College of Missile Engineering have been given a deadline of 2025 to come up with solutions to the seemingly intractable challenges of hypersonic technology.

<https://www.scmp.com/news/china/military/article/3177908/chinese-scientists-work-hypersonic-missile-can-hit-moving-car>

## **U.S., Japan weigh pledge to jointly deter China at Tokyo summit**

Nikkei Asia, 17 May 2022

The Japanese and U.S. governments have begun coordinating on the wording of a joint statement to be released during their summit meeting on Monday in Tokyo, Nikkei has learned. The statement will clearly state a policy of cooperation to "deter and respond to" China's activities in the Indo-Pacific region.

<https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/U.S.-Japan-weigh-pledge-to-jointly-deter-China-at-Tokyo-summit>

## **Construction of Xudapu 4 under way**

World Nuclear News, 19 May 2022

In June 2018, Russia and China signed four agreements, including for the construction of two VVER-1200 reactors as units 7 and 8 of the Tianwan plant in Jiangsu province. In addition, two



further VVER-1200 units were to be constructed at the new Xudapu (also known as Xudabao) site in Huludao, Liaoning province. Agreements signed in June 2019 included a general contract for the construction of Xudapu units 3 and 4, as well as a contract for the supply of nuclear fuel. Russian state nuclear corporation Rosatom will design the nuclear island and supply key equipment, as well as provide field supervision, installation supervision, and commissioning services for the supplied equipment. Turbine generators and balance of plant will be supplied by China. Construction of Xudapu unit 3 began on 28 July 2021. The units are expected to be commissioned in 2027-2028. Rosatom has now announced the start of construction of Xudapu unit 4.

<https://www.world-nuclear-news.org/Articles/Construction-of-Xudapu-4-under-way>

## **Chinese aerospace experts slam NASA's chief for 'ridiculous and outrageous' allegations of 'stealing' technology**

Cao Siqi and Fan Wei

Global Times, 19 May 2022

Chinese aerospace experts slammed NASA's Administrator Bill Nelson for his "ridiculous" and "outrageous" remarks after the senior official alleged that China is "good at stealing" American designs in a "space race." China has achieved space achievements beyond the US despite the strong blockade of the country because China is taking the road of independent space development, experts stressed. During Nelson's testimony at the House Appropriations Committee hearing, he expressed his views when Alabama representative, Robert Aderholt, asked about the steps taken by NASA "to secure American research and development." Aderholt was reportedly referring to the "jarring similarities" that were noticed between the US and Chinese spacecrafts, US media reported. The NASA chief responded that "they [the Chinese] are pretty good at stealing," and

emphasized that the US needs to take cybersecurity "very seriously" both in the private and the public sectors.

<https://www.globaltimes.cn/page/202205/1266116.shtml>

## **Chinese astronomers propose space survey to seek Earth-like planets via astrometry**

Fan Anqi

Global Times, 19 May 2022

Chinese astronomers have proposed a space telescope survey program to search for habitable exoplanets some 32 light-years from Earth. This would be the world's first space exploration mission dedicated to finding neighboring Earth-like planets via astrometry beyond the solar system, the Global Times learned from the project leader. "The search for habitable exoplanets is one of the fundamental research frontiers in astronomy, which concerns major scientific questions such as whether the Earth is 'unique' and how planets become the 'cradle of life'," said Ji Jianghui,

the project leader and research fellow of the Purple Mountain Observatory, affiliated with the Chinese Academy of Sciences. More than 5,000 exoplanets have been found and confirmed so far, of which about 50 are believed to be habitable terrestrial planets, but most of them are thousands of light-years away. "Finding habitable Earth-like planet around the nearby solar-type stars would be a major discovery for mankind and will help us study future human visits and even search for new places to live," Ji told the Global Times.

<https://www.globaltimes.cn/page/202205/1266085.shtml>

## **New one year delay at UK Hinkley Point nuclear plant: EDF**

Bangkok Post, 20 May 2022

An already-delayed giant nuclear plant in southwest England will open a year later than planned and cost up to pound sterling3 billion more than previously thought, French electricity giant EDF said Thursday. The total cost of Hinkley Point C, which aims to provide seven percent of Britain's total power needs, had already swelled to as much as pound sterling23 billion and had been due to begin generation in June 2026, already well behind schedule. Hinkley Point is Britain's first new nuclear power plant in more than two decades.

<https://www.bangkokpost.com/world/2313182/new-one-year-delay-at-uk-hinkley-point-nuclear-plant-edf>

## **Satellite photos suggest China training to attack Japan's aircraft**

Nikkei Asia, 20 May 2022

China has set up an object that appears to be modeled on an airborne warning and control system (AWACS) plane used by the Japan Air Self-Defense Force (JASDF) in a desert area of Xinjiang, Nikkei has learned after analyzing satellite photographs with experts. The object could be used by the Chinese military as a dummy target for training to attack SDF aircraft with missiles, a former senior SDF official pointed out. The object is believed to be modeled on the JASDF's E-767 aircraft. Thomas Shugart, adjunct senior fellow at the Center for a New American Security (CNAS) said, "I looked around to see what AWACS is of that size and shape and has two engines, and there is one: the E-767, which is operated only by the Japan Air Self-Defense Force." The E-767 is manufactured by U.S.-based Boeing, and the four stationed at Hamamatsu Air Base are the only ones operating worldwide, according to the Japanese Ministry of Defense. It flies at a high altitude at more than 800 km per hour, using its back-mounted radar to detect distant aircraft and missiles that cannot be captured by ground-based radar. It has a range of 9,000 km and can monitor an extensive area for a prolonged period of time.

<https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/Satellite-photos-suggest-China-training-to-attack-Japan-s-aircraft>

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