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SYLLOGE ON CHINA

Focus: Nuclear, Space, Missiles and other Security Issues

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INDIAN PUGWASH SOCIETY

Hypersonic arms race set to change power dynamics between countries and the tempo of modern combat

Kristin Huang

South China Morning Post, July 10, 2022

Experts warn that an emerging hypersonic arms race raises the danger of miscalculation and retaliatory strikes. The assessment comes as several countries, including the United States, China and Russia, are developing the highly destructive weapon whose high speed and greater range make them difficult to intercept. In an anti-ship or land-attack role, hypersonic weapons – which can travel at more than five times the speed of sound – could be a significant threat and give a decisive advantage to one side if its opponent lacks a similar capability or the means to defend itself against hypersonic weapons.

<https://www.scmp.com/news/china/military/article/3184617/hypersonic-arms-race-set-change-power-dynamics-between>

Reports claiming ‘China building military base’ in PNG baseless, hype with ulterior motives: Chinese Embassy

Shen Weiduo

Global Times, July 11, 2022

The Chinese Embassy in Papua New Guinea (PNG) has strongly refuted media reports claiming China's cooperation with PNG in the Ihu Special Economic Zone is aimed at building a military base, saying the report was "completely baseless and hype with ulterior motives." The response came as a Daily Mail Australia report claimed on July 3 that China has "handed over \$30million to get a special economic zone in the town of Kikori in PNG's Gulf Province off the ground and are desperate to invest more." "The futuristic \$8 billion development project is set to include an airport, naval base and military base carved out of jungle land in Orokolo Bay at - about 250km northwest of the capital Port Moresby," claimed the report. The report also cited Peter KenGemar, the project director for the special economic zone, who told 60 Minutes Australia that "he does not have a preferred business partner for the ambitious project but admitted Chinese cash is rolling in."

<https://www.globaltimes.cn/page/202207/1270208.shtml>

North Korea hails ties with China as 'unbreakable' on bilateral alliance treaty anniversary

The Korea Times, July 11, 2022

North Korea on Monday called its relations with China "unbreakable" as it marked the 61st anniversary of the signing of their alliance treaty. An article carried by the Rodong Sinmun, the North's main newspaper, spoke highly of the bilateral relations while commemorating the "DPRK-China Treaty of Friendship, Cooperation and Mutual Assistance" signed in 1961. DPRK stands for the North's official name, the

Democratic People's Republic of Korea. "The numerous meetings and talks held between respected Comrade Kim Jong-un with Comrade Xi Jinping in recent years have again demonstrated the great unity between the two countries, which was relentlessly forged into a friendly relationship that can withstand any storm and an invincible strategic relationship unbreakable by anything," it said.

http://www.koreatimes.co.kr/www/nation/2022/07/103_332496.html

China-US five-hour meeting in Bali thoroughly communicated; 'frequent dialogues help solve prominent issues'

Yang Sheng and Wan Hengyi

Global Times, July 11, 2022

Chinese State Councilor and Foreign Minister Wang Yi held a "comprehensive, in-depth, candid and efficient conversation" with US Secretary of State Antony Blinken, to which the two sides attached great importance, after attending the G20 Foreign Ministers' Meeting in Bali, the Global Times has learned. The meeting in Bali lasted more than five hours, which is a long time for a one-on-one meeting and has been rare in ministerial level talks in recent years, the Global Times learned from the meeting. Simultaneous interpretation was adopted throughout the meeting, it also learned. That means the two sides were able to have thorough communication on a wide range of issues in China-US relations, conducive to delivering clear messages from both sides. The Chinese side described the meeting as "substantive" and "constructive" in the press release, which means that the two sides had a pragmatic discussion and covered comprehensive bilateral relations and specific issues in bilateral relations, an analyst told the Global Times.

<https://www.globaltimes.cn/page/202207/1270196.shtml>

China to build world's most far-reaching radar, better safeguard Earth

CGTN, July 11, 2022

China has started construction of a new radar system equipped with high-definition deep-space active observation facility in a move to better safeguard Earth. The new system will also boost the country's defense capabilities against near-Earth asteroids as well as its sensing capability for the Earth-moon system. Located in southwest China's Chongqing Municipality, the new observation facility is codenamed "China Fuyan," which means "facetted eye" in English. According to Long Teng, president of the Beijing Institute of Technology (BIT), the research team gave it that vivid name because the radar system comprises multiple antennas, just like facetted eyes of insects.

<https://news.cgtn.com/news/2022-07-11/China-to-build-world-s-most-far-reaching-radar-better-safeguard-Earth-1bzKE2SvESA/index.html>

Rearmament trend sounds alarm to global security

Guo Xiaobing

Global Times, July 12, 2022

A US military test rocket, the Minotaur II+, which will be used for the LGM-35 Sentinel intercontinental ballistic missile (ICBM) and its nuclear warhead, the Mk21A, exploded about 11 seconds after launch earlier this month. The debut ended in failure, but it shows that the US is accelerating the replacement of its land-based ICBMs and nuclear weapon delivery vehicles. A report published in June by the Stockholm International Peace Research Institute noted, "A key finding is that despite a marginal decrease in the number of nuclear warheads in 2021, nuclear arsenals are expected to grow over the coming decade," and the "post-cold war decline in nuclear arsenals is ending." This will be an important turning point in the process of global nuclear disarmament and nuclear weapons are set to stage a comeback from the fringes of global politics. There are three main reasons for the rearmament trend.

<https://www.globaltimes.cn/page/202207/1270331.shtml>

Shanghai builds a nucleic acid industrial park to boost biomedicine industry

Global Times, July 12, 2022

Shanghai's first nucleic acid industrial park will start construction in the Shanghai Hangzhou Bay Economic & Technological Development Park (SHBAY) in the middle of July, with a planned area of three square kilometers, aiming to take a preemptive step in developing China's biomedicine industry in a post-pandemic era. The news also raised questions among netizens on social media platforms on whether the setup of the new industrial park is a response to the recent Omicron flare-ups in China. "It is a biopharmaceutical industry mainly developing various vaccines and drugs based on RNA, which is the direction of future development for the biopharmaceutical industry and has nothing to do with the flare-ups," according to a statement released on the official Wechat account of the government of Shanghai's Fengxian district, where the park is located.

<https://www.globaltimes.cn/page/202207/1270342.shtml>

China to launch its first solar probe in October

CGTN, July 13, 2022

China will launch its first solar probe, the Advanced Space-based Solar Observatory (ASO-S), in October. The 888-kilogram satellite, scheduled to depart from the Jiuquan Satellite Launch Center, has undergone more than five years of research and development. Designed to operate at an altitude of 720 km, the satellite will complete one sun-synchronous orbit every 90 minutes. During its projected four-year lifespan, the satellite will support catastrophic space weather forecasting by observing the solar magnetic field, solar flares and coronal mass ejections. After entering its orbit, the satellite will generate about 500GB of data daily, all of which will be shared worldwide.

<https://news.cgtn.com/news/2022-07-13/China-to-launch-its-first-solar-probe-in-October-1bD6PRzcf04/index.html>

Scientists test AI for an orbital carrier to defend China's space assets

Zhang Tong

South China Morning Post, July 13, 2022

An orbital carrier controlled by artificial intelligence could be used to patrol and counter attacks in space, according to a new study by Chinese scientists. They say a large orbital platform carrying hundreds of cubesats – tiny satellites that weigh about 1kg (2.2lbs) – could defend China's space assets with speed and efficiency. But they say it would need help from AI to determine exactly when and where to release the cubesats so they could fend off enemy satellites. According to the researchers, the complexity of a large and fast space battle would be beyond the human brain – and even beyond some powerful AI algorithms. Studying the best strategy for AI to control an orbital carrier would have “strong economic and military value”, the team said in a paper published in Chinese Space Science and Technology, a peer-reviewed journal run by the China Academy of Space Technology, on June 25.

<https://www.scmp.com/news/china/science/article/3185176/scientists-test-ai-orbital-carrier-defend-chinas-space-assets>

Jolting wake-up call on Chinese intel theft

John J. Metzler

The Korea Times, July 13, 2022

The jolting but not unexpected wake-up call came from London. In a rare and unprecedented joint press conference, the chiefs of both the British MI5 domestic intelligence service and their American counterpart, the Federal Bureau of Investigation (FBI), presented a poignant and riveting account of China's sweeping intelligence-gathering operations and its wider implications for global business, cyber and military security. FBI Director Christopher Wray warned that China's government poses the "biggest long-term threat to our economic and national security." He labeled the challenge as "immense." MI5 head Ken McCallum said that the British domestic intelligence service "had more than doubled its work against Chinese activity in the last three years and would be doubling it again." McCallum added that, "The most game-changing challenge we face comes from the Chinese Communist Party. It's covertly applying pressure across the globe."

http://www.koreatimes.co.kr/www/nation/2022/07/113_332642.html

China, Pakistan maritime drill concludes

China Military Online, July 13, 2022

Navies of China and Pakistan concluded a four-day joint maritime exercise codenamed Sea Guardians-2 on July 13. Operation planning, professional expertise exchanges, and cultural and sports competitions took place during the manoeuvres. The two navies also held drills including attacking at maritime targets, anti-

submarine operations, and anti-aircraft and anti-missile operations. The joint exercise aims to enhance defence cooperation, exchange expertise and experience, deepen the traditional friendship between the two countries and militaries, and promote the development of the China-Pakistan all-weather strategic cooperative partnership.

http://english.chinamil.com.cn/view/2022-07/13/content_10170720.htm

US successfully tests hypersonic missile, amid fears of lagging behind China, Russia

South China Morning Post, July 14, 2022

The United States successfully tested two Lockheed Martin Corp hypersonic missiles recently, the Pentagon said on Wednesday, amid growing concerns Russia and China have had more success developing their own hypersonic weapons. The US Air Force confirmed it successfully tested its Air-Launched Rapid Response Weapon (ARRW) booster on Tuesday off the California coast. Reuters reported the ARRW test earlier on Wednesday in which the booster was carried aloft under the wing of a B-52H before it was launched. In previous tests, the weapon did not detach from the plane. “This second successful test demonstrates ARRW’s ability to reach and withstand operational hypersonic speeds, collect crucial data for use in further flight tests, and validate safe separation from the aircraft,” Lockheed said in a statement.

<https://www.scmp.com/news/world/united-states-canada/article/3185198/us-successfully-tests-hypersonic-missile-amid-fears>

China urges Japan to attend to concern of various parties over nuclear-contaminated water dump after Pacific FMs declaration

Global Times, July 14, 2022

China urged Japan to attend to the reasonable concerns of various parties about the plan on dumping nuclear-contaminated water from the Fukushima Daiichi Nuclear Power Plant into the sea and abort the plan. The Chinese Foreign Ministry Spokesperson Wang Wenbin made the remarks at a routine press conference, when asked for comments on Pacific Islands Forum Foreign Ministers Meeting's recent declaration on the issue. Wang said that China had taken note of the Pacific Ministers' declaration and felt the same way about the issue. It showed that the international community has serious concerns over the disposal of the nuclear-contaminated water from the Fukushima nuclear plant. The issue does not only involve Japan, but it concerns the global marine environment and the health of residents in nearby countries, Wang noted. However, what frustrates all is that, after more than one year, the Japanese government has yet to provide scientific and convincing explanations to key issues, including the reliability of data on nuclear-contaminated water, efficiency of decontamination facility and uncertainty of its environmental impact, the spokesperson said.

<https://www.globaltimes.cn/page/202207/1270530.shtml>

China launches two new high-resolution remote sensing satellites into space

Cao Qingqing

CGTN, July 16, 2022

China successfully launched two new high-resolution remote sensing satellites from Taiyuan Satellite Launch Center in north China's Shanxi Province at 06:57AM (Beijing Time) on July 16. The pair of satellites, Siwei 03 and 04, were launched by a Long March-2C carrier rocket and entered the planned orbit. They will provide commercial remote sensing data services for emerging sectors such as urban safety and security, real-scene 3D mapping, City Information Modeling for urban planning, as well as digital agriculture and in conventional areas like land resource surveying, natural disaster prevention and mitigation, and maritime monitoring. The first group of satellites, Siwei 01 and 02, were sent into orbit on April 29, 2022.

<https://news.cgtn.com/news/2022-07-16/China-launches-two-new-satellites-into-space-1bHNyOnktVK/index.html>

China's Tianzhou-3 cargo craft separates from space station combination

Xinhua, July 17, 2022

The Tianzhou-3 cargo craft, carrying supplies for China's space station, separated from the orbiting station combination at 10:59AM on July 17 (Beijing Time), after completing all assigned tasks, according to the China Manned Space Engineering Office. China launched the Tianzhou-3 on Sept. 20, 2021 from the Wenchang Spacecraft Launch Site in the southern province of Hainan, delivering six tonnes of goods to the country's under-construction space station. At present, the Tianzhou-3 cargo craft is in good condition and will re-enter the atmosphere under ground control in the future, said the engineering office.

<https://english.news.cn/20220717/745aa4d3876b4b9fb3b2ea180b8ea5b9/c.html>

Chinese scientists simulate hypersonic flight to US after devising BeiDou satellite-switching system

Zhang Tong

South China Morning Post, July 18, 2022

A Chinese satellite navigation system will allow the Chinese military to monitor, or even control, a hypersonic flight from China to the United States, according to a new study by Chinese space scientists. BeiDou is a satellite positioning system similar to GPS that also offers a communication service with global coverage. In the study, the Chinese researchers simulated the flight of a hypersonic vessel launched from Jinan, in China's eastern Shandong province, to New York via the Arctic Ocean. Although China has put several satellite communication networks in orbit, the researchers found that only BeiDou allowed the command centre back on Earth to maintain contact with the hypersonic vehicle while it made wild manoeuvres in the high atmosphere to evade air-defence systems.

<https://www.scmp.com/news/china/science/article/3185709/chinese-scientists-simulate-hypersonic-flight-us-after-devising>

CPC-led scientific innovation breaks foreign tech blockade to make strides in 'artificial sun' research

Cao Siqi and Fan Wei

Global Times, July 18, 2022

The sun provides light and heat for the growth of all things on earth through nuclear fusion reactions. This principle of energy generation gives human inspiration - controlled nuclear fusion could be used to form an "artificial sun" so that humans could develop a steady stream of new clean energy. The technology has become a focus on the global technology powerhouse and China's scientific research and innovation in this field ranks top in the world. In December 2020, the new generation of the "artificial sun" developed by the Southwestern Institute of Physics under the state-owned China National Nuclear Corporation (CNNC) realized its first discharge, laying a solid foundation for the next step of China's independent design and construction of fusion reactors. The achievement was selected as one of the "Top 10 News of Scientific and Technological Progress in China in 2020," and was praised by Xi Jinping, general secretary of the Communist Party of China Central Committee, in the general assemblies of the members of the Chinese Academy of Sciences and the Chinese Academy of Engineering in May 2021.

<https://www.globaltimes.cn/page/202207/1270837.shtml>

This time, China likely won't care (much) about a North Korean nuclear test

John Petrushka

NK PRO, July 19, 2022

After launching missiles at a torrid pace in the first half of 2022, North Korea appears to be gearing up to conduct a nuclear test in the near future. Each of Pyongyang's most recent nuclear tests in 2016 and 2017 garnered visible pushback from Beijing, but that likely won't be the case in 2022. In fact, amid a hostile international environment, domestic challenges and growing Taiwan ambitions, China may even encourage North Korea to operationalize its nuclear arsenal.

<https://www.nknews.org/pro/this-time-china-likely-wont-care-much-about-a-north-korean-nuclear-test/>

US developing satellites to track Chinese and Russian hypersonic weapons

South China Morning Post, July 19, 2022

The United States will spend US\$1.3 billion to develop advanced satellites that will be able to better track hypersonic missile threats, the Pentagon said, announcing two new contracts that will put the detection and tracking systems in orbit by 2025. Derek Tournear, director of the Space Development Agency, said the contracts will provide 28 satellites, as the US moves to greatly expand and enhance its ability to counter increasing threats from Russia and China. Both countries have been making strides in their development of hypersonic missiles, which are more difficult to track and shoot down because they manoeuvre more in

flight than conventional weapons that travel in predictable paths. Last year China tested what US officials said was a hypersonic missile, and Russia has used the weapons in strikes during the war in Ukraine.

<https://www.scmp.com/news/world/united-states-canada/article/3185757/us-developing-satellites-track-chinese-and-russian>

U.S. touts progress in hypersonic arms race with China, Russia

Karoun Demirjian

The Washington Post, July 19, 2022

The Pentagon said it reached important new milestones as it scrambles to catch up with China and Russia in what has become a fraught arms race between the world's most advanced militaries, conducting a successful hypersonic missile test and securing a \$1.3 billion deal to help defend against such threats. The test of the air-breathing hypersonic missile, a partner venture of defense-tech manufacturers Raytheon and Northrop Grumman, follows separate successful tests announced last week using hardware built by Lockheed Martin. Together, they hint at a potential breakthrough for the Defence Department, which has faced growing scrutiny from lawmakers who fear the United States is losing ground to its adversaries and just last month conceded a full-system test fail. Yet with China testing advanced-engine hypersonic missiles and Russia promising to use hypersonic cruise missiles in battle by the end of this year, U.S. officials say there is perhaps greater urgency to develop adequate defences against such weapons. Central to that, they say, is a deal to have L3Harris Technologies and Northrop Grumman design and launch 28 satellites as part of the Pentagon's new missile defence network.

<https://www.washingtonpost.com/national-security/2022/07/19/hypersonic-missile-pentagon-china-russia/>

China's military puts advanced rocket launch system to the test at high altitude

Minnie Chan

South China Morning Post, July 19, 2022

China's military has put the precision strike capability of its new rocket launch system to the test at high altitude, according to state broadcaster CCTV. The People's Liberation Army used the PCL191 multiple launch rocket system – which is mounted on a truck – to hit a target several kilometres away at a desert shooting range in the west of China during a recent test, Sunday's report said. It was reported on state television as the PLA and Indian Army began a 16th round of talks to resolve a protracted border stand-off in the Ladakh region, where at least 20 Indian and four Chinese troops were killed in 2020 – the worst clash on the disputed border in decades.

<https://www.scmp.com/news/china/military/article/3185730/chinas-military-puts-advanced-rocket-launch-system-test-high>

US wants to review China-US military interactions, portraying the bully as an aggrieved, innocent side

Ai Jun

Global Times, July 19, 2022

Mark Milley, chairman of the US Joint Chief of Staff, has ordered a "comprehensive review of US-China military interactions," as "concerns about Beijing's assertive behavior increases," CNN reported. NBC News also covered the case with more detail, saying the US top general ordered his staff to gather information on every interaction between China and the US "in the South China Sea and beyond." Yes, the encounters took place in the South China Sea and nearby waters, not in Hawaii, nor in American coastal waters, but just on China's doorstep. Why do interactions between Chinese and American military forces occur frequently in China's periphery in the first place? The answer is evident - the US has been carrying out an increasing number of provocative activities, including close-in reconnaissance in the region, sending more and more military aircraft and warships, and keeping pooling military deployments and combat forces there. Just within the past few days alone, The USS Ronald Reagan carrier strike group entered the South China Sea on July 13. Earlier that day, the guided-missile destroyer USS Benfold was driven away for illegally trespassing into China's territorial waters off the Xisha Islands. Every time when China makes a move, it is a response to US provocation.

<https://www.globaltimes.cn/page/202207/1270901.shtml>

PLA warplane can 'accompany' Pelosi's plane if she visits Taiwan

Hu Xijin

Global Times, July 19, 2022

An exclusive report in the Financial Times quoted multiple sources as saying Nancy Pelosi, Speaker of the US House of Representatives, will visit Taiwan in August amid her trip to Japan, Singapore, Indonesia and Malaysia. If Pelosi, a fellow Democrat with US President Joe Biden, visits Taiwan, no one will believe it is because Biden "cannot control her". People are more likely to believe that her visit is part of Washington's tactic of "good cop/bad cop." As the Speaker of the House, Pelosi is second in the US presidential line of succession according to the US Constitution. Her visit to Taiwan is not only an escalation of US support for "Taiwan independence," but a major incident. It was reported in April that Pelosi would make the visit, but the planned trip to Asia was cancelled because she tested positive for COVID-19 then. It has been proven that the US will not be reasonable on the Taiwan question, and the only way for China to respond to Washington's provocation is to use resolute countermeasures to make it clear the cost of playing the Taiwan card, which is the only language the US understands.

<https://www.globaltimes.cn/page/202207/1270927.shtml>

China urges U.S. to stop fuelling militarization and weaponisation of outer space

Xinhua, July 19, 2022

The United States should stop fuelling the militarization and weaponisation of outer space, Chinese Foreign Ministry spokesperson Zhao Lijian said. Zhao made the remarks at a regular press briefing when asked to comment on reports that the U.S. Space Force recently activated the National Space Intelligence Center. Zhao stressed that space is a global public sphere and a key factor in humanity's security and wellbeing. Preventing space arms race is an important prerequisite for ensuring peace, tranquillity and sustainable use of outer space. "The U.S. is the main driver in turning outer space into a weapon and a battlefield," Zhao said. For a long time, the U.S. has pursued a strategy for dominance in space and openly defined outer space as a war-fighting domain, and it has been aggressively developing and deploying a variety of offensive outer space weapons such as directed energy and Counter Communications System, said Zhao. He added that the U.S. frequently held military drills and advanced all-round military build-up and preparedness in outer space.

<https://english.news.cn/20220719/19fec0adf40f4e859bb48d5ca4998fc4/c.html>

AUKUS sub deal could involve transferring tons of weapons-grade nuke material: Chinese report

Liu Xuanzun and Guo Yuandan

Global Times, July 20, 2022

China released a research report entitled The Nuclear Proliferation Risk of the Nuclear-powered Submarines Collaboration in the Context of AUKUS, the first report published by Chinese academic institutes to objectively analyse the serious risks of nuclear proliferation and multiple hazards caused by the AUKUS nuclear-powered submarine collaboration through detailed data and case studies. Under AUKUS, the US and the UK are anticipated to provide Australia with eight nuclear-powered submarines involving the transfer of tons of weapons-grade nuclear materials which are enough to manufacture nearly a hundred nuclear weapons, experts warned. Jointly released by the China Arms Control and Disarmament Association (CACDA) and the China Institute of Nuclear Industry Strategy (CINIS), the report said that the AUKUS nuclear-powered submarine collaboration has seriously violated the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), marking a blatant act of nuclear proliferation. The AUKUS nuclear-powered submarine collaboration obviously serves a military purpose, making it a direct violation of the Statute of the International Atomic Energy Agency (IAEA), the report said.

<https://www.globaltimes.cn/page/202207/1270985.shtml>

Chinese scientists plan ‘disposable’ nuclear reactor for long-range torpedo

Stephen Chen

South China Morning Post, July 20, 2022

A Beijing research team says it has completed the conceptual design for a small, low-cost nuclear reactor that would be able to drive a swarm of torpedoes across the Pacific Ocean in about a week. The Chinese researchers are proposing a mini version of the Russian Poseidon unmanned submarine – the world’s first known underwater drone powered by nuclear energy. Unlike the Poseidon, which cannot be mass-produced because it is too big, expensive and destructive, the mini version could be fitted into a standard torpedo tube and launched in large numbers from almost any submarine or warship, the scientists said. Each torpedo would use a disposable nuclear reactor to reach and maintain a cruising speed of over 30 knots (56km/h or 35mph) for 200 hours before dumping the reactor to the seabed and drawing power from a battery to launch an attack with conventional weapons.

<https://www.scmp.com/news/china/science/article/3185980/chinese-scientists-plan-disposable-nuclear-reactor-long-range>

Chinese military slams US warship's transit through Taiwan Strait

China Military Online, July 20, 2022

The US guided-missile destroyer USS Benfold sailed through the Taiwan Strait on July 19 and hyped it up publicly. The Eastern Theater Command of the Chinese People's Liberation Army (PLA) sent its naval and air forces to conduct security tracking and monitoring of the US warship in the whole course, said Senior Colonel Shi Yi, spokesperson for the PLA Eastern Theater Command, in a written statement released. The frequent provocations and power shows made by the US side have fully proven that the US is the disrupter of peace and stability in the Taiwan Strait, and the maker of security risk in the region. Troops of the PLA Eastern Theater Command are on high alert at all times to resolutely safeguard China’s national sovereignty and territorial integrity, said the statement.

http://english.chinamil.com.cn/view/2022-07/20/content_10172254.htm

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