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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

China and United Arab Emirates agree on joint lunar rover mission

Ling Xin

South China Morning Post, September 21, 2022

China has agreed to partner with the United Arab Emirates in an unmanned landing mission to the moon, with the two countries' space agencies signing a pact in Dubai. The unique Chinese mission to the moon's southern polar region will deliver a hopping device that can move in and out of a crater's permanently shadowed area, seeking evidence of water. According to the China National Space Administration, the probe will be the first of its kind, able to repeatedly take off, touch down and fly over a certain distance on the lunar surface – moving across a wider area with greater mobility than a land rover.

<https://www.scmp.com/news/china/science/article/3193232/china-and-united-arab-emirates-agree-joint-lunar-rover-mission>

China sends new naval fleet on Gulf of Aden escort mission

China Military Online, September 21, 2022

The 42nd fleet of the Chinese People's Liberation Army (PLA) Navy set out from a military port in east China's Shandong Province on Wednesday to take over an escort mission from the 41st naval fleet in the Gulf of Aden and the waters off Somalia. The 42nd fleet is mainly composed of naval troops and equipment from the PLA Northern Theater Command, including the guided-missile destroyer Huainan, the missile frigate Rizhao and a supply vessel, with dozens of special-operations soldiers and two helicopters on board. In preparation for the mission, the fleet conducted counter-terrorism and anti-piracy training, and training on commercial vessel rescue, the use of weapons and other subjects.

http://eng.chinamil.com.cn/view/2022-09/21/content_10186380.htm

Biden is throwing rocks inside a glass house with 'defending Taiwan' remarks

Franz Gayl

Global Times, September 21, 2022

President Joe Biden defiantly restated his determination to militarily defend Taiwan island. The President has effectively put down a marker confirming the nuclear-armed US will defend Taiwan's secession if China is compelled to act on its Anti-Secession Law. His statement has given the green light to the Democratic Progressive Party (DPP) to declare independence. China and the US are now on a collision course towards military clash, which may lead to the deployment of

nuclear weapons. Historically, quantitative military comparisons have often sufficed. For example, during the Cold War, images of nuclear weapons incinerating cities intimidated two equally matched nuclear adversaries and contributed greatly to deterrence.

<https://www.globaltimes.cn/page/202209/1275756.shtml>

Chinese FM criticizes dumping of toxic substances by US military in Japan

Global Times, September 22, 2022

As toxic fluorine compounds dumped by the US military in Japan were detected once again in Yokosuka city of Kanagawa Prefecture and sparked concern among locals, Chinese Foreign Ministry spokesperson Zhao Lijian said it reflects that saving the benefits of something for itself and leaving the environmental cost to others is US' standard practice. Yokosuka Municipal Government of Kanagawa Prefecture in Japan announced recently that the amount of toxic fluorine compounds detected in drainage water from a US naval base there exceeded Japanese government-set limits. Mayor of Yokosuka expressed concern saying that "It is truly regrettable. The outflow into the sea may be becoming the norm."

<https://www.globaltimes.cn/page/202209/1275926.shtml>

Scientists at America's top nuclear lab were recruited by China to design missiles and drones, report says

Ken Dilanian

NBC news, September 22, 2022

At least 154 Chinese scientists who worked on government-sponsored research at the U.S.'s foremost national security laboratory over the last two decades have been recruited to do scientific work in China — some of which helped advance military technology that threatens American national security — according to a new private intelligence report obtained by NBC News. The report, by Strider Technologies, describes what it calls a systemic effort by the government of China to place Chinese scientists at Los Alamos National Laboratory, where nuclear weapons were first developed. Many of the scientists were later lured back to China to help make advances in such technologies as deep-earth-penetrating warheads, hypersonic missiles, quiet submarines and drones, according to the report.

<https://www.nbcnews.com/news/world/scientists-americas-top-nuclear-lab-recruited-china-design-missiles-dr-rcna48834>

Microsoft, other US firms expand in China, defying decoupling push

Qi Xijia

Global Times, September 22, 2022

US technology giant Microsoft announced on Wednesday plans to expand recruitment and upgrade its campuses in China, following a series of recent moves and plans of major US businesses, including chipmaker Nvidia, to expand their presence in the Chinese market, despite the US decoupling push. Microsoft said that it will expand its recruitment in China next year to bring the total number of employees to over 10,000, according to a notice on the website of the company. Microsoft already has more than 9,000 full-time employees in China, and 80 percent of them are research and development specialists and engineering technicians. On the basis of expanding recruitment, Microsoft plans to upgrade its campuses in Beijing, Shanghai and Suzhou, East China's Jiangsu Province over the next three to five years.

<https://www.globaltimes.cn/page/202209/1275880.shtml>

Shanghai adopts China's 1st provincial-level AI law to support sound, safe development

Global Times, September 22, 2022

Shanghai's municipal legislature on Thursday passed the country's first provincial-level law covering the development of artificial intelligence (AI), which experts said would effectively fill a gap where there was no specific law for AI and further pave the way for sound and sustainable development of technology. At a meeting, the Shanghai Municipal People's Congress Standing Committee passed the Shanghai Regulations on Promoting the Development of the AI Industry, after public opinion was solicited from August 30 to September 13. The ordinance will come into effect on October 1.

<https://www.globaltimes.cn/page/202209/1275882.shtml>

US' NSA infiltrates China's data infrastructure in cyberattack on leading university

Zhao Siwei

Global Times, September 22, 2022

During the cyberattack against the email system of Northwestern Polytechnical University in China's Shaanxi Province - well-known for its aviation, aerospace and navigation studies - the US' National Security Agency (NSA) was found to have constructed a "legal" channel for remote access to the core data network of some infrastructure operators so that the US intelligence agency

could infiltrate and control the country's infrastructure, the Global Times learned from a source. On June 22, Northwestern Polytechnical University announced that hackers from abroad were caught sending phishing emails with Trojan horse programs to teachers and students at the university in an attempt to steal their data and personal information.

<https://www.globaltimes.cn/page/202209/1275816.shtml>

Chinese researchers simulate hypersonic bombing in wind tunnel

Stephen Chen

South China Morning Post, September 23, 2022

Researchers in southwest China say they have developed the world's most advanced system for testing an aircraft's ability to unload a weapon or small spacecraft at extremely fast speeds, allowing them to test a prototype hypersonic bomber. Since the 1960s, military scientists have used a device known as a captive trajectory system (CTS) during wind tunnel tests to study the cargo offloading ability of bombers and other military aircraft. The systems typically use a small crane to move the bomb or missile away from an aircraft to replicate the parting of two objects against strong currents in a wind tunnel.

<https://www.scmp.com/news/china/science/article/3193407/chinese-researchers-simulate-hypersonic-bombing-wind-tunnel>

China expands submarine base near South China Sea, satellite images show

Jack Lau

South China Morning Post, September 23, 2022

China has been expanding a military submarine base off the South China Sea, new satellite images show. Two new piers around 240 metres (787 feet) long are under construction at the Yulin Naval Base off Yalong Bay in China's southern Hainan province, according to Sentinel-2A satellite imagery taken. Yulin is a major base for the People's Liberation Army (PLA) and home to the navy's advanced submarine fleet. Its location not only allows the PLA South Sea Fleet to access the South China Sea, but also the busy shipping route stretching from the Middle East, through the Strait of Malacca, to East Asia.

<https://www.scmp.com/news/china/military/article/3193555/china-expands-submarine-base-near-south-china-sea-satellite>

As Russia raises nuclear specter in Ukraine, China looks the other way

Nectar Gan

CNN, September 23, 2022

When Russian President Vladimir Putin met with Chinese leader Xi Jinping in Uzbekistan, the mood was noticeably different from their triumphant meeting in Beijing, weeks before Russia's invasion of Ukraine. There was no more touting of their "no-limits" friendship declared on the opening day of the Winter Olympics. Instead, Putin conceded that Beijing had "questions and concerns" about his faltering invasion, in a subtle nod to the limits of China's backing and the growing asymmetry in their relationship. In the Chinese readout of the meeting, Xi did not even refer to the much-heralded "strategic partnership" between Beijing and Moscow, observed Shi Yinhong, an international relations professor at Renmin University in Beijing. It was "the most prudent, or most low-key statement in years" issued by Xi on their strategic relationship, Shi said.

<https://edition.cnn.com/2022/09/22/china/russia-mobilization-china-intl-hnk-mic/index.html>

China's military told to 'resolutely do what the party asks it to do'

Minnie Chan

South China Morning Post, September 23, 2022

China's military mouthpiece has published a lengthy article on President Xi Jinping's ideas on the armed forces, as Beijing's propaganda machine goes into overdrive ahead of a key gathering of the ruling Communist Party. The article, published in PLA Daily, told the People's Liberation Army to follow the party's leadership and carry out assigned tasks, regardless of how difficult and dangerous they are. It comes less than a month before the party congress that is expected to see Xi secure an unprecedented third term in power and usher in sweeping changes at the top, including the military's supreme command.

<https://www.scmp.com/news/china/military/article/3193454/chinas-military-told-resolutely-do-what-party-asks-it-do>

China's 3rd aircraft carrier starts mooring trials ahead of 10th anniversary of commissioning of the country's first carrier: report

Liu Xuanzun and Guo Yuandan

Global Times, September 24, 2022

China's third aircraft carrier has started mooring trials, the country's state broadcaster announced. This indicates smooth progress for the carrier's construction and tests since its launch in June, analysts said. Celebrating the upcoming 10th anniversary of the commissioning of the country's

first aircraft carrier, the Liaoning, China Central Television (CCTV) announced that the country's third aircraft carrier, the Fujian, is conducting mooring trials as planned. Over the last few days, the Fujian has been undergoing equipment installation and calibration work, with related test missions being conducted at the same time, according to a separate report by CCTV. Having a displacement of more than 80,000 tons and being the country's first carrier equipped with electromagnetic catapults and arresting devices, the Fujian was launched in Shanghai on June 17. Official reports said at the time that after the launch, the carrier would start mooring trials and sea trials.

<https://www.globaltimes.cn/page/202209/1275983.shtml>

China calls on US to responsibly stop feeding 'gray rhino' of Taiwan conflict

Zhang Han and Wang Qi

Global Times, September 24, 2022

Chinese State Councilor and Foreign Minister Wang Yi warned that the Taiwan question has become the biggest point of risk in China-US relations, as he prepared for a meeting with US Secretary of State Antony Blinken in New York, which the world is watching closely to see whether and how the two major powers can navigate through the tension to avoid serious conflict, while analysts hold low expectations. Wang and Blinken are set to meet on the sidelines of the 77th UN General Assembly and discuss a range of bilateral and global issues as part of ongoing efforts to maintain open lines of communication and manage competition responsibly, according to the US Department of State. The meeting will not be a turning point in China-US tensions and the descending spiral will continue, as observers agreed almost unanimously that the US will continue its provocations over the Taiwan question and all-out strategic containment of China.

<https://www.globaltimes.cn/page/202209/1275980.shtml>

China's Wang reiterates claim on Taiwan, warns of interference

Marrian Zhou

Nikkei Asia, September 25, 2022

Beijing remains committed to the reunification of Taiwan, Foreign Minister Wang Yi told the United Nations General Assembly, saying "only when China is fully reunified can there be true peace across the Taiwan Strait." Warning of "separatist activities" in Taiwan, Wang said any move to oppose China's unification effort will be crushed by "the wheels of history." "China will continue to work for peaceful reunification with the greatest sincerity and efforts to realize this goal," Wang said. "We must combat Taiwan independence separatist activities with the firmest

resolve and take the most forceful steps." Wang's nearly 23-minute speech comes amid rising U.S.-China tensions over the self-ruled island. The two countries are also divided over the response to Russia's war in Ukraine, which was a main topic as leaders took to the podium one after another to call for a peaceful end to the conflict.

<https://asia.nikkei.com/Politics/International-relations/China-s-Wang-reiterates-claim-on-Taiwan-warns-of-interference>

Xinjiang to host world's most powerful steerable 110-meter radio telescope by 2028

Deng Xiaoci

Global Times, September 25, 2022

Northwest China's Xinjiang Uygur Autonomous Region will become home to the world's most powerful steerable 110-meter radio telescope by 2028, as construction kicked off near Qitai county, some 200 kilometers to region's capital Urumqi on September 21, the Global Times learned from the project builder and future operator. Wang Na, the head of the Xinjiang Astronomical Observatory (XAO) under the Chinese Academy of Sciences, revealed during an exclusive interview with the Global Times on Sunday that the 110-meter steerable radio telescope codenamed QTT - shorthand for QiTai radio Telescope - has a wide range of working frequency from 150 MHz to 115 GHz, meaning it is capable of observing radio waves from meter-level to millimeter with a high precision, and can also observe three fourths of the whole sky.

<https://www.globaltimes.cn/page/202209/1276062.shtml>

China launches two new experimental satellites

China Military Online, September 25, 2022

China on Sunday launched a Kuaizhou-1A carrier rocket to place two satellites in space. The pair of satellites, Shiyang-14 and Shiyang-15, were lifted at 06:55AM (Beijing Time) from the Taiyuan Satellite Launch Center in the northern province of Shanxi and soon entered the preset orbit. The Shiyang-14 will mainly be used to conduct scientific experiments and verify new technologies, while the Shiyang-15 will provide data in the fields of land survey, urban planning, and disaster prevention and mitigation. It was the 18th flight mission of the Kuaizhou-1A series rockets, according to the launch center.

http://eng.chinamil.com.cn/view/2022-09/25/content_10187110.htm

China Goes Nuclear

Isabella Borshoff

The Wire China, September 25, 2022

In 1969, scientists at the U.S. Department of Energy's Oak Ridge National Laboratory (ORNL) in Tennessee switched off a pioneering experiment in nuclear power generation for the last time. Now, the Chinese government has given the go-ahead for a plant based on their blueprint in Gansu Province, in western China. The Gansu plant — which uses what's known as a Thorium Molten-Salt Reactor — was jointly developed by the Shanghai Institute of Applied Physics (SINAP) and the State Nuclear Power Automation System Engineering Company.

<https://www.thewirechina.com/2022/09/25/china-goes-nuclear/>

NE China's first nuclear plant to provide heating to residents this winter

Global Times, September 26, 2022

Unit 6 of the Hongyanhe nuclear power plant in Northeast China's Liaoning Province has reportedly entered full operations, and it's set to provide heating to local residents over land area of 242,400 square meters in the town of Hongyanhe this winter, China Media Group (CMG) reported. The development will help ensure winter power supply in the region, which faced severe power shortages last year. The move also comes as China moves swiftly to expand production of nuclear power and other clean energy, amid global energy challenges and the country's carbon emissions reduction goals. Nuclear heating will be more efficient than coal heating, discharging no carbon dioxide, according to CMG. The plant cost nearly 90 billion yuan (\$12.56 billion) and has a total installed capacity exceeding 6.7 million kilowatts. It's the largest operating nuclear power plant in China and the third-largest worldwide.

<https://www.globaltimes.cn/page/202209/1276126.shtml>

China's next-gen solar-powered drone expected to make debut soon

Liu Xuanzun, Deng Xiaoci and Liu Yang

Global Times, September 26, 2022

China is expected to unveil its next-generation, solar-powered large unmanned aerial vehicle (UAV) with very long endurance soon, which will have a larger wingspan than its predecessors that allows it to carry larger payloads for missions including reconnaissance, monitoring and communications relay in near-space, said Chinese experts familiar with the matter. The remarks came after the country's latest drone of this kind made its maiden flight earlier this month. In 2017, China's first solar-powered large drone, the CH-T4 of the world-famous CH drone series, made its

maiden flight, staying aloft for 15 hours at altitudes of more than 20,000 meters. This made China the third country to develop such an aircraft following the UK and the US. Having a wingspan of around 45 meters, the CH-T4 has set a very high starting point for China's solar-powered drone development, with all core technologies and equipment being domestically made, a source familiar with the Chinese drone industry told the Global Times on condition of anonymity.

<https://www.globaltimes.cn/page/202209/1276162.shtml>

Chinese space watchers wish best of luck to NASA's asteroid crash mission, the first planetary defense endeavour

Deng Xiaoci

Global Times, September 26, 2022

Chinese space watchers wished on Monday the best luck for NASA's upcoming ambitious Double Asteroid Redirection Test (DART) asteroid crash mission, saying that if successful, it would mark a first victory in human's planetary defense endeavor which carries great significance for mankind's survival. Coming amid the multiple delays of the Artemis I mission; NASA's DART asteroid crash is designed to slam a spacecraft into the tiny moon of the asteroid Didymos on September 26. If all goes well, the spacecraft will hit the moonlet called Dimorphos, and snap images until the moment of impact. It will be mankind's first-ever asteroid defense experiment and also a first for human to attempt to change the orbit of an asteroid via a crash mission.

<https://www.globaltimes.cn/page/202209/1276160.shtml>

US plans 'Chip 4' meeting to bring semiconductor manufacturing back to its shores

Global Times, September 26, 2022

The US reportedly plans to organize the preliminary "Chip 4" meeting this week, and another science and technology meeting with the island of Taiwan in early November, to bring semiconductors manufacturing back to the US land, while try to exclude the Chinese mainland from the global supply chain. The first meeting of the US-led "Chip 4" semiconductors alliance is expected to take place this week, the Korea Herald reported. At the first meeting, working-level officials of the US, South Korea, Japan and the island of Taiwan are expected to participate remotely. They are expected to discuss setting the identity and trajectory of the envisioned chip alliance, according to the report.

<https://www.globaltimes.cn/page/202209/1276151.shtml>

AUKUS' plan to expedite Australia's nuclear sub construction an act of nuclear proliferation under 'naval nuclear propulsion' cover: Chinese mission to UN

Leng Shumei and Hu Yuwei

Global Times, September 26, 2022

The Chinese mission to the UN in Vienna warned in an exclusive statement sent to the Global Times that the latest move by AUKUS to plan to expedite Australia's nuclear submarine construction is a blatant defiance of and trampling on the international nuclear non-proliferation system, and is an act of nuclear proliferation under the pretext of "naval nuclear propulsion." A spokesperson of the Chinese mission to the UN and other international organizations in Vienna made the comment after leaders of the US, UK and Australia said marking the one-year anniversary of the AUKUS security pact that they have made "significant progress" toward Australia acquiring a nuclear-powered submarine. In disregard of the serious concerns of the international community on the trilateral nuclear submarine deal, the US is insisting on and even making reckless remarks about accelerating the deal, which is a blatant defiance of and trampling on the international nuclear non-proliferation system, the spokesperson told the Global Times in the statement.

<https://www.globaltimes.cn/page/202209/1276076.shtml>

Chinese radar study lends weight to theory of ancient ocean on Mars

Ling Xin

South China Morning Post, September 27, 2022

Scientists have used a ground-penetrating radar on China's Mars rover to find possible evidence of flooding events on the red planet billions of years ago. Though no direct evidence for liquid water was found in the shallow subsurface, the study lends weight to the theory that the rover's landing area once hosted an ancient ocean, the team said in a Nature paper published online. The researchers from the Chinese Academy of Sciences and Peking University also said the possibility of water existing at lower depths could not be ruled out.

<https://www.scmp.com/news/china/science/article/3193853/chinese-radar-study-lends-weight-theory-ancient-ocean-mars>

Chinese navy's newest Type 075 landing helicopter dock looks set to enter service

Minnie Chan

South China Morning Post, September 27, 2022

The People's Liberation Army's third Type 075 landing helicopter dock (LHD) is expected to be commissioned soon as the Chinese military steps up training for possible military action in the

Taiwan Strait. Military enthusiasts have posted pictures of the LHD berthed at a dock in Hudong Zhonghua shipyard in Shanghai, showing its new pennant number 33, on social media sites such as Weibo and WeChat. The ship's hull number means it is "ready to join the navy any time, [and is] just waiting for a formal announcement", according to Li Jie, a Beijing-based naval analyst. Its two sister ships, the Hainan and Guangxi, have the hull numbers 31 and 32. The amphibious platform is designed to carry armed attack helicopters and vertical take-off and landing unmanned aerial vehicles, according to earlier media reports.

<https://www.scmp.com/news/china/military/article/3193689/chinese-navys-newest-type-075-landing-helicopter-dock-set-enter>

Countries with the largest nuclear arsenals should reduce their nuclear arsenals first: Chinese envoy to the UN

Global Times, September 27, 2022

Countries with the largest nuclear arsenals should earnestly fulfill their special and priority responsibilities and further significantly and substantially reduce their nuclear arsenals to create conditions for the eventual realization of comprehensive and complete nuclear disarmament, Geng Shuang, China's deputy permanent representative to the UN, told the UN General Assembly (UNGA). The UNGA held a high-level meeting to mark the International Day for the Total Elimination of Nuclear Weapons. As UN described, it provides an opportunity to educate the public—and their leaders—about the real benefits of eliminating such weapons, and the social and economic costs of perpetuating them. Geng said during the meeting that the complete prohibition and thorough destruction of nuclear weapons and the eventual establishment of a nuclear-weapon-free world serves the common interests of mankind and is the shared aspiration of all countries.

<https://www.globaltimes.cn/page/202209/1276193.shtml>

China's Mars rover finds no evidence of liquid water down to 80 meters in landing area but presence of saline ice may exist

Deng Xiaoci

Global Times, September 27, 2022

Chinese scientists have further revealed the subsurface structure and stratification of Mars in the Utopia Planitia region where Zhurong - the rover of the country's Tianwen-1 Mars mission - landed, suggesting there was no evidence of the existence of liquid water down to 80 meters in the area but there could have been two major floods that probably shaped the region. The in-situ ground-penetrating radar survey of the Martian subsurface structure in a southern marginal area of Utopia Planitia conducted by the Zhurong rover of the Tianwen-1 mission showed that there was no direct evidence for the existence of liquid water within the radar detection depth range.

However, the Chinese scientists said that they cannot rule out the presence of saline ice in the subsurface of the landing area, according to their latest journal on the findings published by Nature.

<https://www.globaltimes.cn/page/202209/1276243.shtml>

New US nuclear sub made for China, Russia war

Gabriel Honrada

Asia Times, September 27, 2022

The US is designing its SSN(X) next-generation nuclear attack submarine in a significant shift from procuring Virginia class SSNs to a new class by the 2030s. The program addresses maintenance woes in its current nuclear attack submarine fleet and reorients US undersea warfare capabilities to great power competition from China and Russia. The designation “SSN(X)” means that the exact design of the nuclear attack submarine class has not yet been determined, according to an August 2022 US Congressional Research Service (CRS) report. Although the Virginia class is built with incremental improvements called “blocks,” a new design that solves maintenance problems and includes game-changing technologies may represent the development of a new class altogether.

<https://asiatimes.com/2022/09/new-us-nuclear-sub-made-for-china-russia-war/>

Researchers shed light on smart tech that made Chinese flag the first on Mars

Stephen Chen

South China Morning Post, September 27, 2022

Chinese researchers for the first time shared details about the technology that made China the first country to put its national flag on Mars, forcing former US president Donald Trump to eat his words. The US placed its flag on the moon more than 50 years ago and intends to do it again on the red planet. “The United States will be the first nation to plant our beautiful American flag on planet Mars,” Trump said in 2019. But on May 15, 2021, after an interplanetary journey of nearly 500 million km (300 million miles) lasting over 300 days, China’s Tianwen spacecraft unfurled a Chinese flag on Mars – the first national banner placed on the planet. The red flag with five yellow stars, made of a cloth-like smart material, moved gently in the Martian breeze.

<https://www.scmp.com/news/china/science/article/3193962/researchers-shed-light-smart-tech-made-chinese-flag-first-mars>

‘Never-seen-before equipment’ from PLA to appear at Airshow China 2022: senior colonel

Global Times, September 27, 2022

The 14th China International Aviation and Aerospace Exhibition, or Airshow China 2022, will kick off on November 8 in Zhuhai, South China's Guangdong Province, with various active service aircraft of the People's Liberation Army (PLA) Air Force, represented by the 20 series, making their debuts at the show. This year's show has registered a better-than-expected number of exhibitors - more than 740 companies from 43 countries and regions - with state-of-the-art exhibits that cover land, sea, air, aerospace, electronics and cyber applications, according to information released at a press conference. An estimated 100 airplane types will be on display at the airshow, and countries including the US, France, Germany, Italy and Saudi Arabia will participate in the event. Boeing, Airbus and GE will be in attendance, Huang Zhihao, the mayor of Zhuhai, confirmed at the press conference.

<https://www.globaltimes.cn/page/202209/1276229.shtml>

Indian Ocean rivalry: China's naval maneuvers irk New Delhi

Ken Moriyasu, Kiran Sharma

Nikkei Asia, September 27, 2022

Beijing has sold, gifted or is in talks to deliver submarines to Pakistan, Bangladesh, Myanmar and Thailand -- countries that surround India. The client list has left analysts pondering the potential strategic implications. Meanwhile, at any given time, there are "between five to eight Chinese navy units" in the Indian Ocean, Kumar told the annual convention of the All India Management Association. Darshana Baruah, head of the Indian Ocean Initiative at the Carnegie Endowment for International Peace, said: "While China's primary interests are in the Western Pacific, the Indian Ocean is where its vulnerabilities lie." "Of the 10 countries that supply three-fourths of China's crude oil, nine rely on a safe, secure and stable Indian Ocean to transport their goods," she said. "As China continues to move forward in its maritime and global ambitions, securing the Indian Ocean will become a priority."

<https://asia.nikkei.com/Spotlight/Asia-Insight/Indian-Ocean-rivalry-China-s-naval-maneuvers-irk-New-Delhi>

Chinese, Russian warships in ‘show of solidarity’ near Alaska

Minnie Chan

South China Morning Post, September 27, 2022

A US Coast Guard ship on routine patrol in the Bering Sea near Alaska came across Chinese and Russian warships conducting a joint operation that analysts say was a “show of solidarity”. The

crew of the Kimball, a Honolulu-based cutter, first discovered a Chinese guided-missile cruiser about 75 nautical miles north of Kiska Island, Alaska, in the United States exclusive economic zone on September 19, the Coast Guard said. Kiska is part of the Aleutian Islands and lies roughly 2,000km (1,300 miles) southwest of Anchorage and about 1,100km (700 miles) from Russia. The US Coast Guard said the Kimball crew later identified another two Chinese naval ships in formation with four Russian naval vessels – including a Russian frigate – operating as a “combined surface action group” within the US zone. It said the operation could have been part of joint naval drills following Russia’s week-long Vostok 2022 war games that ended on September 7.

<https://www.scmp.com/news/china/military/article/3193978/chinese-russian-warships-show-solidarity-near-alaska>

IAEA general conference to first review China-proposed agenda on AUKUS nuclear sub deal concerns

Global Times, September 28, 2022

The issue of a nuclear submarine deal between the US, UK, and Australia, and inherent risks will officially be reviewed upon China's proposal for the first time at the 66th annual International Atomic Energy Agency (IAEA) General Conference to be held from September 26 to 30 in Vienna, Austria, after IAEA members expressed great concern over the potential danger of nuclear proliferation, the Global Times learnt from the Chinese mission to the UN in Vienna. In September 2021, the US, the UK, and Australia announced the establishment of AUKUS, under which the US and the UK will assist Australia in acquiring nuclear-powered submarines. Leaders from the US, UK, and Australia said recently that they have made "significant progress" toward Australia acquiring a nuclear-powered submarine.

<https://www.globaltimes.cn/page/202209/1276365.shtml>

China’s stealth fighter jets now seeing duty in all 5 theatre commands

Jack Lau

South China Morning Post, September 28, 2022

China’s military is now operating its home-grown stealth fighter jet in all five of the country’s theatre commands, according to an air force spokesman. “J-20 fifth-generation fighters are operating in the east, south, west, north and central [theatre commands], are increasingly used by forces, and are flying farther and farther,” Senior Colonel Shen Jinke said. The warplane was being deployed in the East China Sea, the South China Sea and the Taiwan Strait, Shen said at a press conference promoting the China International Aviation and Aerospace Exhibition to be held in Zhuhai in November. When it made its maiden flight in 2011, the J-20 “Mighty Dragon” was considered a symbol of China’s efforts to modernise the People’s Liberation Army (PLA). With

the jet's introduction, China became the second country after the United States to operate a stealth fighter capable of supersonic cruising speeds.

<https://www.scmp.com/news/china/military/article/3194104/chinas-stealth-fighter-jets-now-seeing-duty-all-five-theatre>

NATO accepts S.Korea's request to set up mission; closer security alliance 'risks exacerbating regional division'

Fan Anqi and Du Qiongfang

Global Times, September 28, 2022

In a step further underpinning the security alliance between NATO and South Korea, NATO has announced it has accepted Seoul's request to designate its embassy in Belgium as its diplomatic mission to NATO, a move that experts said would undoubtedly exacerbate regional confrontation and division. Describing it as "an important step in NATO's strong partnership with the Republic of Korea," NATO pledged to strengthen dialogue and cooperation with new and existing partners in the Indo-Pacific to tackle cross-regional challenges. The announcement came after South Korean President Yoon Suk-yeol, for the first time in history, attended a NATO summit in Madrid in June, to express the country's interest in underpinning a security alliance with the US' Western allies.

<https://www.globaltimes.cn/page/202209/1276344.shtml>

China's rock samples brought back from the moon shed light on meteor strikes here on Earth, say scientists

Holly Chik

South China Morning Post, September 29, 2022

The international team of 23 scientists from institutes in Australia, Britain, China, Sweden and the United States analysed 215 glass beads with a diameter over 50 micrometres, similar to the size of human hair. The beads were selected under the microscope from 2 grams (0.07oz) of Chang'e 5 lunar regolith – loose rock and dust – allocated by the China National Space Administration and analysed by experts using microscopic analytical techniques, numerical modelling and geological surveys. "The data ... give an initial indication that lunar glass populations may provide a proxy for changing impact rates in the inner solar system and possible relationships to dynamical processes in the asteroid belt," the team wrote in an article published in the peer-reviewed journal Science Advances.

<https://www.scmp.com/news/china/science/article/3194140/chinas-rock-samples-brought-back-moon-shed-light-meteor-strikes>

U.S. doubles down on extra-large drone subs to counter China

Ryo nakamura

Nikkei Asia, September 29, 2022

The U.S. Navy is moving to deploy extra-large underwater drones that can potentially conduct secret offensive and intelligence-gathering activities at a lower cost than conventional submarines, contributing to deterrence against China. U.S. Secretary of Defense Lloyd Austin visited the Naval Information Warfare Center Pacific in San Diego on Wednesday. While there, he was briefed on the current status of the development of unmanned submarines and surface ships. Austin emphasized the need for "collaboration" in a "very sophisticated" field. "You all are operating on the cutting edge here, and I challenge you to keep pushing yourselves and keep innovating for the warfighter," Austin said

<https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/U.S.-doubles-down-on-extra-large-drone-subs-to-counter-China>

What Xi must tell Putin now

Mike Mullen, Sam Nunn and Ernest J. Moniz

The Washington Post, September 29, 2022

The terrible concoction of conscription, annexation and nuclear weapons that Russian President Vladimir Putin delivered presents a crucial test to every major world leader. Global outrage is needed, but the spotlight now shines brightest on Chinese President Xi Jinping. He needs to step forward in pressing Putin to de-escalate and end this war, especially since Russian miscalculations are forcing major geopolitical decisions, specifically security challenges in Asia. The most sensible policy choice for China is to wield its unique position of influence to encourage more "rational" decision-making by Putin. In particular, President Xi must make clear to Putin that nuclear use is a line he must not cross and that nuclear saber-rattling itself threatens the global nuclear order.

<https://www.washingtonpost.com/opinions/2022/09/29/xi-putin-ukraine-nuclear-arms/>

China's military companies tap new investors after U.S. sanctions

Kenji Kawase

Nikkei Asia, September 29, 2022

For an indication of how China's military-industrial complex is dealing with U.S. sanctions, consider the case of China Satellite Communications. China Satcom, which Washington placed off-limits to U.S. investors, is preparing a private placement of 400 million new shares and has opened a bank account for the expected funds. "The process with regard to the private placement

is moving along in an orderly way," Li Zhongbao, the company's chairman, told investors during an online conference on September 16. China Satcom and its controlling shareholder, China Aerospace Science and Technology Corp. (CASC), were among 68 Chinese military-industrial companies, known as CMICs, whose equity Washington has targeted for sanctions, curbing U.S. investors' ability to back them financially. But while the restrictions make it more difficult for the companies to grow, Beijing is doing its best to fill the gap and keep the key strategic sector on track.

<https://asia.nikkei.com/Politics/International-relations/US-China-tensions/China-s-military-companies-tap-new-investors-after-U.S.-sanctions>

Disengagement of Chinese, Indian troops in Jianan Daban conducive to peace in border areas: Defense Spokesperson

China Military Online, September 29, 2022

The disengagement of Chinese and Indian troops in the area of Jianan Daban is conducive to promoting peace and tranquility in the border areas, said Senior Colonel Tan Kefei, a spokesperson for China's Ministry of National Defense, at a regular press conference. The spokesperson made such remarks when being asked to comment on what some analysts have said that the disengagement is conducive to easing up the tension between the two countries. According to Tan, in line with the consensus reached in the 16th Round of China-India Corps Commander Level Meeting, the front-line troops of the two militaries in the area of Jianan Daban recently staged disengagement simultaneously in a planned manner.

http://eng.chinamil.com.cn/view/2022-09/29/content_10188357.htm

The new geopolitics of nuclear power

Sung-Mi Kim

Chatham House, September 29, 2022

Like Russia, Chinese government-owned nuclear corporations have started to make forays into export markets as part of its Belt and Road Initiative and 'Go Out' policy, which encourages companies to invest overseas. Both China and Russia have a strong comparative advantage in offering competitive state-backed financing schemes for nuclear products and services. In the meantime, nuclear investment in advanced economies in the West have tended to remain stagnant. The International Energy Agency reports that of the 31 reactors built in the past five years, 27 are of Russian or Chinese design.

<https://www.chathamhouse.org/publications/the-world-today/2022-10/new-geopolitics-nuclear-power>

Chinese navy shows off growing fleet of advanced weaponry in new videos

Minnie Chan

South China Morning Post, September 29, 2022

The Chinese navy has, for the first time, released video footage of its most advanced Type 094A nuclear-powered ballistic missile submarine and Type 093 nuclear-powered attack submarine. The vessels appeared in a training video for China's first combat-ready aircraft carrier, the Liaoning. It's the first time that state news broadcaster CCTV has aired video of the Type 094A, also known as the Long March-18, since the submarine was put into service on April 23 last year as part of celebrations to mark the 72nd anniversary of the People's Liberation Army Navy. The Type 094A is capable of launching the JL-3 or Julang (Big Wave) ballistic missile, which has a range of more than 10,000km (6,200 miles) – enough to hit the US mainland.

<https://www.scmp.com/news/china/military/article/3194302/chinese-navy-shows-growing-fleet-advanced-weaponry-new-videos>

Rapid growth of China's nuclear arsenal can be a threat to US, American General warns

The Daily Guardian, September 30, 2022

China's rapid growth of its nuclear arsenal can be a threat to the US, American General Anthony Cotton has warned. General Anthony Cotton warned the Senate Armed Services Committee about the threat of China's rapid growth of its nuclear arsenal, but China is still far from being a threat to the US, The Singapore Post reported. Recent geographical developments in China show the country's rapid building of missile silos which house its missiles. Beijing had 229 new fields under construction at Hami and Yumen, created as recently as 2021. As per the sources, China has a total of 350 warheads, which are ready to use, of which, 248 ballistic missiles are for land use, and 72 ballistic missiles are for deployment in the sea.

<https://thedailyguardian.com/rapid-growth-of-chinas-nuclear-arsenal-can-be-a-threat-to-u-s/>

Fuel despatched for China's CFR-600 fast neutron reactor

World Nuclear News, September 30, 2022

Two more shipments are due to follow this year from Elemash Machine-building plant, Rosatom's TVEL fuel company said, which will cover the initial load of the reactor core and the first refueling. Construction of unit 1 of what is also known as the Xiapu fast reactor demonstration project began in 2017. It is part of China's plan to achieve a closed nuclear fuel cycle. China National Nuclear Corporation announced in December 2020 that construction work had begun on a second unit at the plant. The aim has been for the first unit to be grid connected around 2023.

The reactors will be 1500 MWt, 600 MWe, with 41% thermal efficiency, using mixed-oxide (MOX) fuel with 100 GWd/t burn-up, and with two sodium coolant loops producing steam at 480°C. Later fuel will be metal with burn-up 100-120 GWd/t. Breeding ratio is about 1.1, design operational lifetime 40 years. The design has active and passive shutdown systems and passive decay heat removal.

<https://www.world-nuclear-news.org/Articles/Fuel-despatched-to-China-for-CFR-600-fast-neutron?feed=feed>

China and Russia to boost satellite navigation systems with new ground stations

Jack Lau

South China Morning Post, September 30, 2022

China and Russia have agreed to build satellite ground stations on each other's soil to improve how their global navigation systems work together, according to Russian space agency Roscosmos. The agreement aimed to make Russia's GLONASS and China's BeiDou systems more reliable and accurate, the Russian agency said in a statement. Under contracts China and Russia signed at a regular meeting on satellite navigation, GLONASS stations will be installed in three Chinese cities: Changchun in the northeast, Urumqi in the northwest and Shanghai in the east.

<https://www.scmp.com/news/china/diplomacy/article/3194387/china-and-russia-boost-satellite-navigation-systems-new-ground>

China will deliver first homegrown C919 jet by end-2022

Nikkei Asia, September 30, 2022

China expects to deliver the first homegrown C919 narrow-body jet by the end of the year after it was certified by the country's aviation regulator, state media reported. The news came a day after photos of a certification ceremony for the plane, designed to rival single-aisle jets made by Airbus and Boeing, were posted on social media. State-owned Xinhua News Agency also said President Xi Jinping met with a C919 delegation in Beijing, ahead of the country's National Day. During the meeting, Xi emphasized China's focus on making technological breakthroughs to speed up its development as a manufacturing powerhouse. The country must focus on key core technologies and put safety and reliability first to eliminate all potential safety problems, he said, according to Xinhua.

<https://asia.nikkei.com/Business/Transportation/China-will-deliver-first-homegrown-C919-jet-by-end-2022>

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