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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

India to deploy home-grown Stinger-style missiles at China border for air defence

South China Morning Post, January 11, 2023

India will buy portable air defence missiles to deploy along the borders with China as militarisation in the region gathers speed and hostilities between the two countries enter a third year. The Defence Acquisition Council – headed by Defence Minister Rajnath Singh – cleared the purchase of the very short-range missiles that can be carried by troops, according to a statement issued. “In view of the recent developments along the northern borders there is a need to focus on effective air defence weapon systems which are man portable and can be deployed quickly in rugged terrain,” the ministry said.

<https://www.scmp.com/news/asia/south-asia/article/3206393/india-deploy-homegrown-stinger-style-missiles-china-border-air-defence>

China tests engine for next-gen manned rocket; nation’s plan unaffected by US hyping of space race

Deng Xiaoci

Global Times, January 11, 2023

China has made new progress in its development of next-generation manned rockets, with developers recently conducting a torch ignition experiment for the third-stage engine of the craft at a ground environment. According to the Sixth Research Academy of China Aerospace Science and Technology Corporation (CASC), the academy’s 101 Institute conducted the test at the institute’s upper stage testing venue, and they have acquired the flow characteristics of the oxygen ignition system in the ground environment, which could provide sufficient support for the ground testing of engine ignition reliability in the next stage.

<https://www.globaltimes.cn/page/202301/1283627.shtml>

UK and Japan to sign defence pact to counter China threat

Jasmine Cameron-Chileshe and George Parker

Financial Times, January 11, 2023

Rishi Sunak, the UK prime minister, and his Japanese counterpart, Fumio Kishida, will on Wednesday sign a defence agreement, enabling the UK and Japan to deploy forces in each other’s countries. The move comes as the UK government seeks to strengthen its engagement in the Asia-Pacific region to counter the influence of China, although the war in Ukraine has forced London to reassess its global strategy.

<https://www.ft.com/content/55742e74-c9f5-4617-bfe7-49beb1ecec70>

Chinese scientists' claims for new quantum code-breaking algorithm raise eyebrows in the US

Stephen Chen

South China Morning Post, January 11, 2023

Mainstream encryption in use today may become vulnerable within years instead of decades after Chinese researchers proposed a new code-breaking algorithm to run on a small quantum computer built from technology already within reach. But some senior security and quantum experts in the United States have raised concerns as well as doubts about that claim coming out of China. Quantum computers can speed up the factoring of large numbers – a difficult task for traditional computers – to break codes in a relatively short period.

<https://www.scmp.com/news/china/science/article/3206384/chinese-scientists-claims-new-quantum-code-breaking-algorithm-raise-eyebrows-us>

Philippine court voids oil exploration pact involving China

Nikkei Asia, January 11, 2023

The Philippine Supreme Court declared unconstitutional a 2005 pact by China, the Philippines and Vietnam to jointly explore for oil in the disputed South China Sea, a decision that also brings other proposed agreements into doubt. The decision by 12 of the court's 15 justices voided the Joint Marine Seismic Undertaking agreement by state-owned companies in the three nations, which are among Asian countries locked in decades-long territorial disputes in the busy waterway.

<https://asia.nikkei.com/Politics/International-relations/South-China-Sea/Philippine-court-voids-oil-exploration-pact-involving-China>

US attempts to manipulate semiconductors to ruin sector

Global Times, January 11, 2023

The US, Mexico, and Canada pledged to ramp up the development of semiconductor supply chains in North America, according to an official document released by the White House after the 2023 North American Leaders' Summit. The White House said that the region will in early 2023 organize the first-ever trilateral semiconductor forum with the industry being asked to adapt government policies and increase investment in semiconductor supply chains across North America. But Mexican producers have imported a lot of intermediate goods, raw materials and machinery from China.

<https://www.globaltimes.cn/page/202301/1283622.shtml>

Device to detect orbital particles mounted outside China's space station

Global Times, January 12, 2023

A particle detector has been installed on the extravehicular platform of China's space station to obtain key data used for the space station's safety, extravehicular activities of the astronauts, biological experiments, and the study of space material. The energy particle detector in Wentian lab has been transported via the cargo airlock cabin, assisted by a robotic arm. Wentian lab weighs 20 tons, and was launched by Long March vehicles into the space in July, 2022.

<https://www.globaltimes.cn/page/202301/1283715.shtml>

A Pentagon Report on China Fuels a Military Spending Frenzy in the US

Michael T. Klare

The Nation, January 12, 2023

“China to Have 1,500 Nuclear Warheads by 2035: Pentagon.” That was the headline at ABC News on November 29, the day the Department of Defense released the 2022 edition of its annual report on “Military and Security Developments Involving the People’s Republic of China,” also called the China Military Power report. The Pentagon’s claim that China’s nuclear stockpile would jump from some 400 warheads today to an estimated 1,500 in 2035 was widely reported in the popular media and seized upon by military hawks in Congress to clamor for increased military spending.

<https://www.thenation.com/article/world/pentagon-report-on-china-fuels-military-spending-frenzy-in-us/>

China's versatile spacecraft makes multiple science, technology breakthroughs

Deng Xiaoci

Global Times, January 12, 2023

China has released the second batch of science and technology results collected from the first spacecraft of the country's Innovation X satellite series, which achieved multiple national and international firsts such as the first solar transition zone image, as well as the brightest Gamma-ray bursts (GRBs) ever recorded, the Global Times learned from developers. The spacecraft code-named SATech-01 was developed by the Innovation Academy for Microsatellite of the Chinese Academy of Sciences (CAS), and it has been orbiting the Earth for five months.

<https://www.globaltimes.cn/page/202301/1283692.shtml>

China will win quantum computing race unless West ups its game

Rob Jesudason

Nikkei Asia, January 12, 2023

NASA's launch of its first Artemis rocket from Florida two months ago officially ignited a new phase in the global space race. The successor to the Apollo program, Artemis aims to take Americans back to the moon before China lands its first astronauts on the lunar surface. The program is emblematic of the battle for technological supremacy between the U.S. and China. A Chinese research paper published last month suggests the country's scientists may already have found a way to crack standard encryption using current quantum technology.

<https://asia.nikkei.com/Opinion/China-will-win-quantum-computing-race-unless-West-ups-its-game>

Chinese military invents smart shield designed to make laser weapons useless.

Stephen Chen

South China Morning Post, January 12, 2023

Military researchers in southeastern China say they have created a material that can prevent missiles from being blinded by laser defence systems while maintaining a clear view of their target. A lot of high-value military hardware – from Apache attack helicopters to Air Force One – is equipped with laser weapons that can fire a beam to deflect a homing missile. Most of these defence systems cannot destroy the missile itself, but the beam can produce a large and intense glare on its infrared sensor, causing the missile to lose its target.

<https://www.scmp.com/news/china/science/article/3206540/chinese-military-invents-smart-shield-designed-make-laser-weapons-useless>

China launches first satellite with high-power electric drive

Stephen Chen

South China Morning Post, January 13, 2023

China launched a communication satellite on January 13 with an unusually powerful electric engine, according to state media. The Apstar-6E satellite, launched from the Xichang satellite launch centre shortly after 2AM, will offer high-speed communication services for users in Southeast Asia with a total bandwidth over 30 Gbps. “The satellite will conduct the first in-orbit verification of high-power ion and Hall electric propulsion technology,” Science and Technology Daily, an official newspaper run by the Chinese Ministry of Science and Technology, reported.

<https://www.scmp.com/news/china/science/article/3206732/china-launches-first-satellite-high-power-electric-drive>

Successful launches mark strong start to 2023 for China's space industry

Fan Anqi and Deng Xiaoci

Global Times, January 13, 2023

Marking a good start to another ambitious year for China's space industry, the country successfully carried out two launch missions from different launch sites, sending China's first all-electric propulsion communications satellite to a preset orbit via a Long March-2C carrier rocket and three other satellites to a designated orbit via a Long March-2D vehicle.

<https://www.globaltimes.cn/page/202301/1283775.shtml>

Mainland China's grip on Taiwan's arsenal revealed by 'incredible' security blunder

Lawrence Chung

South China Morning Post, January 14, 2023

The revelation that a sensitive hi-tech device from one of Taiwan's most powerful missiles was recently sent to the Chinese mainland for repairs has underscored Beijing's hidden grip on the island's arsenal, analysts said. It has also exposed the security risk Taiwan faces through its reliance on global logistics supply chains, and the paramount importance the island must place on ensuring the security of its highly sensitive military contracts and outsourcing agreements, the experts said.

<https://www.scmp.com/news/china/military/article/3206779/mainland-chinas-grip-taiwans-arsenal-revealed-incredible-security-blunder>

PLA aircraft carrier Shandong holds confrontational drills in South China Sea amid US carrier strike group's entry of region

Liu Xuanzun and Guo Yuandan

Global Times, January 15, 2023

The Shandong aircraft carrier group of the Chinese People's Liberation Army (PLA) Navy recently held a series of confrontational drills in the South China Sea at a time when a US carrier strike group had entered the region, with analysts saying that the Chinese carrier has practically enhanced its combat readiness, while the US carrier only stirred up tensions and had limited military significance

<https://www.globaltimes.cn/page/202301/1283836.shtml>

Chinese bombers, fighter jets in new year military drills appear to have boosted combat capacity

Kristin Huang

South China Morning Post, January 15, 2023

Recent drills by China's advanced J-20 stealth fighters and nuclear-capable H-6 bombers highlighted the air force's improved operational combat abilities, according to state media reports. The People's Liberation Army's Eastern and Southern theatre commands carried out their first flight training of the new year last week, as the Chinese military continues training and equipment upgrades under its swift modernisation drive. An Eastern Theatre Command brigade deployed several J-20 fighters for simulated strike operations, state broadcaster CCTV reported.

<https://www.scmp.com/news/china/military/article/3206827/chinese-bombers-fighter-jets-new-year-military-drills-seen-display-boosted-combat-capacity>

Japan, US sign new space cooperation pact, exposes 'obvious anti-China color'

Global Times, January 15, 2023

Representatives from the US and Japan gathered at the US' NASA headquarters in Washington and signed an agreement that "builds on a long history of collaboration in space exploration between two nations." However, the underlying anti-China color of the agreement is worryingly obvious, since it came just shortly after US Secretary of State Antony Blinken made remarks last week that the US and Japan agree China is their "greatest shared strategic challenge" and they confirmed that an attack in space would trigger a mutual defense provision in the US-Japan security treaty, Chinese observers warned.

<https://www.globaltimes.cn/page/202301/1283823.shtml>

China trounces U.S. in AI research output and quality

Kotaro Fukuoka, Shunsuke Tabeta and Akira Oikawa

Nikkei Asia, January 16, 2023

China is the undisputed champion in artificial intelligence research papers, a Nikkei study shows, far surpassing the U.S. in both quantity and quality. Tencent Holdings, Alibaba Group Holding and Huawei Technologies are among the top 10 companies producing AI research, according to the study. The Chinese contingent is steadily gaining representation in an area dominated by U.S. players. AI research often leads to real-world applications, and both American and Chinese companies have gone all in on AI research and development.

<https://asia.nikkei.com/Business/China-tech/China-trounces-U.S.-in-AI-research-output-and-quality>

Japan, India start fighter jet drills 'with growing military ambitions instigated by US against China'

Liu Xuanzun

Global Times, January 16, 2023

Japan and India launched their first joint fighter jet exercise, a move analysts said exposed the two countries' growing military ambitions against China under the instigation of the US. The 11-day Veer Guardian-23 aerial maneuvers are scheduled to run until January 26 in the airspace around the Japan Air Self-Defense Force's Hyakuri and Iruma air bases in Ibaraki Prefecture, the Japan Times reported. The drills aim to continue deepening defense and security ties between Japan and India amid China's growing capabilities in the Indo-Pacific region, the report claimed

<https://www.globaltimes.cn/page/202301/1283882.shtml>

Taiwan presidential contender sparks US concerns over China tensions

Kathrin Hille

Financial Times, January 16, 2023

On Sunday, President Tsai Ing-wen's ruling Democratic Progressive party elected Lai its chair, following Tsai's resignation as party leader after the DPP's defeat in local polls. With Tsai's grip over her party weakened long before her final presidential term ends next year, DPP politicians expect Lai to become the party's uncontested candidate to succeed her. That moves to centre stage a man virtually unknown outside Taiwan and often described as "deep green" — shorthand for more radical pro-independence leanings — foreshadowing an even more turbulent year in cross-Strait relations given China's unprecedented military threats against Taiwan.

<https://www.ft.com/content/073c1abc-b230-48df-986e-42002b817e6a>

South China Sea: PLA strike group holds live-fire drills after US warships enter region

Minnie Chan

South China Morning Post, January 16, 2023

A Chinese aircraft carrier strike group has conducted intensive live-fire drills in the South China Sea since the US Navy sent its USS Nimitz strike group to the area last week. The flotilla is led by the Shandong, China's first domestically built aircraft carrier, and includes a Type 055 stealth guided-missile destroyer and three guided-missile destroyers. The strike group began a series of confrontational drills in the South China Sea last week, the PLA Navy said on its WeChat account.

<https://www.scmp.com/news/china/military/article/3207012/south-china-sea-pla-strike-group-holds-live-fire-drills-after-us-warships-enter-region>

Scientists from China, overseas obtain valuable data from Tianwen-1 during Sun outage

Fan Anqi and Deng Xiaoci

Global Times, January 16, 2023

Scientists from home and abroad have obtained a large amount of data recently by observing the solar influence on signals between China's first Mars probe Tianwen-1 and that of the European Space Agency (ESA) during a month-long Sun outage, which will help researchers to study the near-Sun space environment and its impact on deep space communications. In late September, communication between China's Zhurong Mars rover and the Earth began experiencing partial or full blackouts due to disturbances caused by the Sun's radiation, which was caused by a phenomenon known as a solar outage, when the Earth and Mars fall on either side of the Sun in an almost straight line.

<https://www.globaltimes.cn/page/202301/1283897.shtml>

Xi's incoherent policies signal danger, former Japan general warns: Lt Gen Isobe (Retd)

Ken moriyasu

Nikkei Asia, January 17, 2023

Gen Isobe said the signals coming from Beijing are worrisome. From the abrupt abandoning of the zero-COVID policy to a winding down of the tech sector clampdown and a reversal of real estate regulations, the incoherent zigzags warn that President Xi Jinping may not be receiving the best advice from his "all subordinate" cabinet. The situation itself, Isobe said, also signals danger.

<https://asia.nikkei.com/Editor-s-Picks/Interview/Xi-s-incoherent-policies-signal-danger-former-Japan-general-warns>

PLA Air Force's Wang Hai Air Group fully equipped with J-20 fighter jets, expels foreign aircraft by giving full play to stealth capability

Liu Xuanzun

Global Times, January 17, 2023

The Chinese People's Liberation Army (PLA) Air Force recently expelled foreign aircraft threatening China's territorial airspace with J-20 fighter jets, giving full play to the aircraft's stealth capability. Experts said that PLA forces are well-equipped and well-trained in dealing with all sorts of threats. As the first combat unit of the PLA Air Force that is fully equipped with J-20 fighter jets, the Wang Hai Air Group under a brigade of the PLA Eastern Theater Command carried out missions that safeguard China's national sovereignty and territorial integrity, including combat

alert patrols in the East China Sea and the Taiwan Straits, China Central Television (CCTV) reported.

<https://www.globaltimes.cn/page/202301/1283958.shtml>

China's military sends in junior air force pilots to tackle rise in US spying missions

Minnie Chan

South China Morning Post, January 17, 2023

Chinese fighter pilots fresh out of training college have been sent on combat-ready patrol missions along the country's southeast coast as the air force confronts a growing number of close-in spying flights by foreign planes, according to state media. Junior pilots have been sent on the patrols in the East and South China seas to expel foreign jets as little as a month after completing fighter pilot training, state broadcaster CCTV reported.

<https://www.scmp.com/news/china/military/article/3207146/chinas-military-sends-junior-air-force-pilots-tackle-rise-us-spying-missions>

'Maximum Xi Jinping' will be costly for China and its people

Ian Bremmer

Nikkei Asia, January 18, 2023

Xi Jinping's ability to make arbitrary decisions that impact the lives of billions of people is now unrivaled, following his emergence from last year's Communist Party national congress with tighter control over both the ruling party and China than any leader since Mao Zedong. This has enabled Xi to continue his state-centric approach to China's economy and an overtly nationalist foreign policy with even less internal resistance than he has encountered since beginning his consolidation of power a decade ago.

<https://asia.nikkei.com/Opinion/Maximum-Xi-Jinping-will-be-costly-for-China-and-its-people>

PLA air defense missile unit tests quick deployment with Y-20 transport aircraft for 1st time

Liu Xuanzun

Global Times, January 18, 2023

A top surface-to-air missile unit of the Chinese People's Liberation Army (PLA) Air Force recently took part in a systematic confrontational exercise, in which it for the first time tested its quick deployment capability by flying with Y-20 large transport aircraft. This method will significantly

enhance China's air defense flexibility, analysts said. Stationed in Southwest China's border region, a land-based missile battalion affiliated with the air force of the PLA Southern Theater Command participated in the Red Sword exercise and won the top award, the Golden Shield, China Central Television (CCTV) reported.

<https://www.globaltimes.cn/page/202301/1284029.shtml>

China space keeps upbeat momentum, eyeing nearly 70 orbital launches in 2023: CASC blue paper

Global Times, January 18, 2023

China's state-owned aerospace giant China Aerospace Science and Technology Corporation (CASC) issued its annual blue paper, revealing nearly 70 launches to send 200 spacecraft into space this year, compared with the current record of more than 50 in 2022. The Global Times learned at the release event that the China Space Station, having completed the in-orbit construction and assembly stage, has entered the application and development stage and started normal operations after completing in-orbit construction and assembly.

<https://www.globaltimes.cn/page/202301/1284030.shtml>

Could Chinese hypersonic weapons tap Wi-fi bandwidth for communication?

Stephen Chen

South China Morning Post, January 18, 2023

An antenna developed by a Shanghai research team could open up low-cost communication bandwidths to hypersonic missiles travelling at five times the speed of sound or more. The researchers said data from ground experiments suggested the unusually tolerant antenna achieved a “remarkable” performance at radio frequencies from 5.2 to 5.8 gigahertz – a relatively low frequency zone usually reserved for 5G smartphones, high speed Wi-fi routers and other consumer applications.

<https://www.scmp.com/news/china/science/article/3207079/could-chinese-hypersonic-weapons-tap-wi-fi-bandwidth-communication>

China urges Japan to stop irresponsible plan of dumping nuclear-contaminated water amid wide criticism

Global Times, January 19, 2023

China's Foreign Ministry urged Japan to stop its irresponsible plan to force the dump of nuclear-contaminated water into the sea, after the Japanese government announced that the discharge of Fukushima water would start around this spring or summer, sparking widespread criticism both at

home and abroad. The Japanese government gave an estimate for when the water from the crippled Fukushima No. 1 nuclear power plant will be released into the sea, saying at a cabinet meeting held on January 13 that it could happen sometime "around this spring or summer."

<https://www.globaltimes.cn/page/202301/1284098.shtml>

China's hyperloop completes first test runs, pushing ahead in race for ultra-fast land transport

Stephen Chen

South China Morning Post, January 19, 2023

A Chinese research facility developing an ultra-fast hyperloop train has completed its first test runs using a full-sized passenger capsule, according to media reports. China Space News reported that three test runs were completed at a superconducting maglev test line in Datong, Shanxi province. The project aims to eventually carry passengers and cargo at a speed of 1,000km/h (621mph) or faster in a near-vacuum tube and, if successful, would be the world's fastest ground-based transport technology.

<https://www.scmp.com/news/china/science/article/3207355/chinas-hyperloop-completes-first-test-runs-pushing-ahead-race-ultra-fast-land-transport>

Beijing keeps the tech sector guessing

Cissy Zhou

Nikkei Asia, January 19, 2023

As two of the most prominent targets of Beijing's tech crackdown, Tencent Holdings and Alibaba Group Holding have been among those most buoyed by hopes of an easing. Shares of both companies recently hit six-month highs. In a more high-profile move, the Chinese Communist Party boss of Zhejiang province even visited Alibaba's headquarters in Hangzhou, the provincial capital, pledging "unswerving" support to the e-commerce conglomerate that has been hit hard by Beijing's tech crackdown. But skeptics say Beijing's softer tone does not mean a return to an earlier era of a freer, faster-growing tech sector.

<https://asia.nikkei.com/techAsia/Beijing-keeps-the-tech-sector-guessing>

China forms all-weather remote sensing monitoring system for all waters, islands: top aerospace authorities

Global Times, January 19, 2023

China's space technology was deeply applied in the country's various industries in 2022, forming an all-weather remote sensing monitoring system for infrastructure including all sea areas and islands under its jurisdiction, the China Aerospace Science and Technology Corporation (CASC)

said during the release of the Blue Book of China Aerospace Science and Technology Activities. China has developed a series of satellites for ocean color, marine dynamics and surveillance, which have formed the capability of continuously and frequently covering observations of global waters, and have achieved remarkable results in applications in areas including island management, marine resource investigation and supervision, marine environmental monitoring and forecasting.

<https://www.globaltimes.cn/page/202301/1284060.shtml>

China will not be the answer to South Korea's economic troubles

Peter S. Kim

Nikkei Asia, January 19, 2023

As he took office, investors feared that Yoon's expected pivot toward Washington after five years under his predecessor of prioritizing relations with China and North Korea would anger Beijing and be costly for South Korea's economy. Before THAAD, Seoul enjoyed the fruits of globalization from a decade of booming trade with China, which bought South Korean industrial products to facilitate its investment-driven growth. In the years after China's entry into the World Trade Organization in 2002, it became South Korea's top export market.

<https://asia.nikkei.com/Opinion/China-will-not-be-the-answer-to-South-Korea-s-economic-troubles>

China's cyberspace authorities continue standardizing online law enforcement; 420 apps shut down in 2022

Global Times, January 20, 2023

Last year, the Chinese cyberspace authorities continued to intensify and standardize online law enforcement based on the principle of combining punishment with education, during which 8,608 websites and platforms were investigated, with 6,767 receiving warnings and 420 apps being shut down. Among the 8,608 websites and platforms, 512 were fined and 621 were suspended from operating or updating, according to the announcement by the Cyberspace Administration of China (CAC). The CAC also worked with telecom authorities to cancel the license or registration of 25,233 illegal websites, and it provided relevant information to judicial organs.

<https://www.globaltimes.cn/page/202301/1284120.shtml>

Japan's three-in-one missile trained on China

Gabriel Honrada

Asia Times, January 20, 2023

Japan aims to enhance its missile arsenal with interchangeable warheads, a likely asymmetric response to China's growing fighter fleet and Japan's current airpower limitations. This week, the

Yomiuri Shimbun reported that Japan is developing a cruise missile that can be equipped with interchangeable reconnaissance, electronic warfare (EW) and conventional warheads. The report claims that launching different types of missiles in one attack can improve accuracy, thereby increasing deterrence. Asia Times has reported on Japan's plans to deploy 1,000 upgraded cruise missiles by 2026 to improve its counterstrike capabilities against China. Japan will deploy these missiles from ships, fighters and mobile launchers on its Southwest Islands and Kyushu.

<https://asiatimes.com/2023/01/japans-three-in-one-missile-trained-on-china/>

China replacing old J-7 'Flying Leopards' with J-16 multirole jets as challenges from US, allies grow: analysts

Minnie Chan

South China Morning Post, January 20, 2023

The Chinese military is replacing its ageing J-7 jet fleet with advanced J-16 multi-role jets as the country gears up to face increased challenges in the region, analysts said. State broadcaster CCTV confirmed that the first batch of J-16s had been deployed to the People's Liberation Army's Western Theatre Command, which includes the Xinjiang and Tibet military districts, and is responsible for border security along the contested Himalayan frontier with India. But defence experts said the J-16 had now been deployed to all five PLA theatre commands, noting that the new generation aircraft was going to replace the ageing J-7, or JH-7 "Flying Leopard" fighter bomber, which had served the armed forces for three decades.

<https://www.scmp.com/news/china/military/article/3207616/china-replacing-old-j-7-flying-leopards-j-16-multirole-jets-challenges-us-allies-grow-analysts>

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