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China military scientists work on laser to improve hypersonic missile and plane speeds

Stephen Chen

South China Morning Post, July 27, 2021

China is developing a unique laser device for hypersonic military aircraft and missiles to fly faster and further, according to scientists involved in the project. When travelling at hypersonic speed – five times the speed of sound, or beyond – planes and weapons usually meet a lot of resistance from the air, which can affect flight safety and increase the amount of fuel needed. Streamlining their shape can help to reduce this resistance, known as “drag”, but further improvements need a more aggressive approach.

https://www.scmp.com/news/china/science/article/3142581/china-military-scientists-work-laser-imprhttp://english.chinamil.com.cn/view/2021-07/26/content_10067212.htmmove-hypersonic-speeds

Britain could pursue Sizewell C nuclear project even without Chinese funding, source says

South China Morning Post, July 27, 2021

The British government is planning to press ahead with its flagship Sizewell C nuclear project even without Chinese funding, according to a person familiar with the situation. The proposed £20 billion (US\$27.5 billion) plant in eastern England is still viable, despite the government exploring ways to remove state-owned China General Nuclear Power (CGN) from all future projects in the UK, the person said, speaking on condition of anonymity.

The government committed in December to financing at least one large-scale nuclear project by 2025. Sizewell’s majority partner, Electricite de France SA, is in talks with the UK on options that may now exclude CGN’s support. The Chinese company has a 20 per cent stake in the development of the power station. “Chinese nuclear energy companies have state-of-the-art technology and strong investment capabilities,” China’s UK embassy said in a statement. “If such cooperation is to be suspended under duress, this will be against UK’s interest.” CGN didn’t immediately respond to an emailed request for comment. EDF declined to comment. The move underlines how Prime Minister Boris Johnson’s administration is hardening its stance toward China due to security issues. Members of his Conservative Party have repeatedly expressed concern about China’s increasing involvement in critical aspects of UK infrastructure.

<https://www.scmp.com/news/world/europe/article/3142740/britain-poised-pursue-sizewell-nuclear-project-even-without>

A 2nd New Nuclear Missile Base for China, and Many Questions About Strategy

William J. Broad and David E. Sanger

New York Times July 26, 2021

In the barren desert 1,200 miles west of Beijing, the Chinese government is digging a new field of what appears to be 110 silos for launching nuclear missiles. It is the second such field discovered by analysts studying commercial satellite images in recent weeks. It may signify a vast expansion of China's nuclear arsenal — the cravings of an economic and technological superpower to show that, after decades of restraint, it is ready to wield an arsenal the size of Washington's, or Moscow's. Or, it may simply be a creative, if costly, negotiating ploy.

The new silos are clearly being built to be discovered. The most recent silo field, on which construction began in March, is in the eastern part of the Xinjiang region, not far from one of China's notorious "re-education" camps in the city of Hami. It was identified late last week by nuclear experts at the Federation of American Scientists, using images from a fleet of Planet Labs satellites, and shared with The New York Times.

"The silo construction at Yumen and Hami constitutes the most significant expansion of the Chinese nuclear arsenal ever," Matt Korda and Hans M. Kristensen wrote in a study of the new silo field. For decades, they noted, China has operated about 20 silos for big, liquid-fuel missiles, called the DF-5. But the newly discovered field, combined with one hundreds of miles away in Yumen, in northeast China, that was discovered by the James Martin Center for Nonproliferation Studies in Monterey, Calif., will give the country roughly 230 new silos. The existence of that first field, of about 120 silos, was reported earlier by The Washington Post. The mystery is why China's strategy has changed.

There are several theories. The simplest is that China now views itself as a full-spectrum economic, technological and military superpower — and wants an arsenal to match that status. Another possibility is that China is concerned about American missile defenses, which are increasingly effective, and India's nuclear buildup, which has been rapid. Then there is the announcement of new hypersonic and autonomous weapons by Russia, and the possibility that Beijing wants a more effective deterrent. A third is that China is worried that its few ground-based missiles are vulnerable to attack — and by building more than 200 silos, spread out in two locations, they can play a shell game, moving 20 or more missiles around and making the United States guess where they are. That technique is as old as the nuclear arms race.

<https://www.nytimes.com/2021/07/26/us/politics/china-nuclear-weapons.html>

China, Mongolia vow to enhance military cooperation, maintain regional stability

Ministry of National Defense, July 26, 2021

Chinese State Councilor and Defense Minister General Wei Fenghe held talks with Mongolian Defense Minister Gursed Saikhanbayar in Ulaanbaatar on July 26. Wei Fenghe said that China and Mongolia are friendly neighbors linked by mountains and rivers, and the building of community with a shared future for the two countries has achieved continuous and concrete progress. Since the outbreak of the Covid-19 pandemic, the two countries stood by and helped each other, overcame difficulties together, setting a model of anti-pandemic cooperation between neighboring countries and injecting positive energy into the turbulent and restless world, Wei said. The two sides should continue to firmly support each other's core interests and

major concerns, and meanwhile, maintain sharp vigilance against extraterritorial forces' interfering in regional affairs, and jointly safeguard regional security and stability, Wei added.

Gen. Wei told his Mongolian counterpart that the Chinese military is willing to work with the Mongolian side to implement the important consensus reached by the leaders of the two countries, enhance strategic mutual trust and expand pragmatic cooperation, with the aim of making greater contributions to the sound and stable development of the comprehensive strategic partnership between the two countries.

http://eng.mod.gov.cn/news/2021-07/26/content_4890289.htm

More discriminatory moves against Chinese firms will sour China-UK economic ties

Wang Yiwei

Global Times, July 26, 2021

The UK is reportedly considering ways to remove China's nuclear energy company China General Nuclear Power Group (CGN) from its future power projects. "It's a further sign that relations between the countries are deteriorating," Bloomberg reported. Bilateral collaboration on a nuclear power station was once a showcase project in the "Golden Era" in ties between the two countries. Yet in July, there were reports that nuclear power may be the next area facing political interference by the UK government after its arbitrary Huawei ban, a turning point for China-UK ties.

Affected by factors including the US influence, the UK, which at one time promoted economic and trade cooperation with China according to rules of free market economics, is increasingly using national security guises to strengthen the scrutiny of China's investments. It's currently only another round of hype among foreign media outlets, but if the UK government takes actions on CGN, it would further hurt bilateral economic ties and cause severe cost to UK itself.

<https://www.globaltimes.cn/page/202107/1229694.shtml>

China is building a new type of unmanned research ship

Liu Zhen

South China Morning Post, July 24, 2021

A Chinese shipbuilder has begun work on an unmanned scientific ship that could be a "game changer" for the country's marine research, according to a trade publication. The vessel – said to be the first of its type – will carry drones and be equipped to conduct air, sea surface and underwater monitoring remotely, China Ship News reported. It could be used for everything from disaster prevention and mitigation work to seabed mapping, environmental monitoring and maintenance of offshore wind farms. "The ship will use sensors, satellite communication, the internet and other technological means to autonomously navigate in open water, and it will dock and leave the dock with assistance," the report said. "It could be a game changer for marine survey work."

China is the world's biggest shipbuilder and has ambitions of becoming a global maritime power. As well as navy ships, it has also been investing heavily in research vessels in recent years, with the newest and biggest expected to make its maiden voyage to the South China Sea in October. With a displacement of 2,100 tonnes the new research ship will be bigger than the Chinese navy's Type 056 guided-missile corvette. It is being built in Guangzhou by the Huangpu Wenchong Shipyard, a subsidiary of the China State Shipbuilding Corporation, which develops both research vessels and warships. Work began on Tuesday but the shipbuilder did not say when it was expected to be completed. The vessel's design is futuristic and streamlined – it will measure 88.5 metres long and 14 metres wide – and its unmanned systems and drones will be able to form a network to observe designated targets, according to the report. It will also have a monitoring and control system to keep track of how the vessel is operating remotely.

Chinese marine research activities have been greeted with suspicion by neighbours in the resource-rich South China Sea, where its survey ships have caused disputes – though Beijing insists their activities are for the public good. China claims most of the waterway but those claims are contested by Vietnam, the Philippines, Malaysia, Brunei and Taiwan.

<https://www.scmp.com/news/china/military/article/3142318/china-uses-drone-restore-phone-coverage-assess-damage-after>

China uses drone to restore phone coverage, assess damage after floods

Kristin Huang

South China Morning Post, July 23, 2021

China deployed drones to aid emergency communications and conduct damage assessment in areas affected by this week's floods, mainland media reported. It represented the first disaster relief deployment for the Wing Loong 2H emergency relief unmanned aerial vehicle (UAV), which had been tested in an exercise last October for tasks such as restoring communications and sending real-time images in areas without base station coverage. Emergency services once relied on helicopters to drop supplies and equipment in disaster-hit areas, but all-weather, long-duration drones such as the Wing Loong 2H can perform relief operations more safely and efficiently.

<https://www.scmp.com/news/china/military/article/3142318/china-uses-drone-restore-phone-coverage-assess-damage-after>

China orders the military to forge stronger ties with the public

Kristin Huang

South China Morning Post, July 23, 2021

A new provision to come into effect on Sunday lays out the tasks to improve and support the relationship. Close links with the public have been key to the military's success in the past, analyst says. China has for the first time detailed the military's responsibility to strengthen its

bonds with the public to win wars, a move analysts said would improve its power and reach. Fostering ties with the public has long been an official priority for the People's Liberation Army but military regulations have in the past focused on the spirit of the relationship rather than the specifics of those links. According to state news agency Xinhua, the "Provision for the Military on Works with the Chinese People" defines the "status, guiding principles and basic tasks" of the process, laying out key points and the regulatory requirements for the military.

<https://www.scmp.com/news/china/military/article/3142249/china-orders-military-forge-stronger-ties-public>

China's latest military equipment on display at Museum of the CPC

Liu Xuanzun

Global Times, July 22, 2021

Models of some of China's latest and most advanced pieces of military equipment, including new light arms, an aircraft carrier task group and a hypersonic missile, are on exhibition at the Museum of the Communist Party of China (CPC) in Beijing. The museum opened to the general public last week. Some experts have said that the display showcases the latest development of China's national defense and its significance to the Chinese People's Liberation Army (PLA).

On display was a group of life-size models of domestically developed new-type light arms: a 9mm-caliber submachine gun, a 5.8mm-caliber auto rifle family, a 5.8mm-caliber precision rifle, a 5.8mm-caliber squad automatic weapon, a 7.62mm-caliber general-purpose machine gun, a 7.62mm-caliber sniper rifle, a 8.6mm-caliber sniper rifle, a 12.7mm-caliber sniper rifle, and a 9mm-caliber pistol family. They attracted the attention of many military enthusiasts, who said some of the guns were being displayed for the first time to the public. The exhibition did not provide the designations of the light arms.

<https://www.globaltimes.cn/page/202107/1229374.shtml>

New PLA Air Force bomber set to be 'best in world'

Zhao Lei

China Daily, July 22, 2021

The next-generation bomber of the People's Liberation Army Air Force, one of the Chinese military's most anticipated aircraft, will be world-class in terms of technology and capability, according to a well-informed observer. Fu Qianshao, a retired equipment expert from the PLA Air Force, said the new Chinese bomber, popularly dubbed the H-20, will be more powerful than the United States' Northrop Grumman B-2 Spirit, now the mightiest bomber in the world, and will be bigger than the Northrop Grumman B-21 Raider, the next US long-range, stealth strategic bomber. He said the world-class design of the new Chinese aircraft, whose official code name has not yet been disclosed, will outshine its peers around the world.

"Once the new bomber is unveiled, it will definitely be world-leading hardware thanks to our

unique technologies, and will be equipped with reliable engines," Fu said this month. "People only need to wait patiently to see the rise of the Chinese aviation industry and the PLA Air Force." He said research and development of the bomber was highly sophisticated and involved many industrial sectors.

<https://global.chinadaily.com.cn/a/202107/22/WS60f8d0dba310efa1bd6639b8.html>

Sherman's China trip more of 'keeping in touch' than 'problem solving'

Wang Qi

Global Times, July 22, 2021

US Deputy Secretary of State Wendy Sherman visited South Korea, the last stop before her highly anticipated meeting with Chinese State Councilor and Foreign Minister Wang Yi and Vice Minister Xie Feng in North China's Tianjin, which will take place from July 25 to 26. Although Sherman will be the highest-level US official to visit China under the Biden administration, amid deteriorating bilateral relations, Chinese political experts view the visit as one of "keeping in touch" rather than problem-solving. Moreover, Seoul and Tokyo, Washington's allies, have shown varying degrees of conservatism with the repetitive US "anti-China pattern."

The Global Times found that in South Korea's Yonhap News Agency's report covering Sherman's meeting with South Korean President Moon Jae-in and South Korean Foreign Minister Chung Eui-yong, no China-related issue was mentioned - only the background of trilateral talks in Tokyo, which involve the US' attitude toward China. Following Sherman's meeting with the vice foreign ministers of Japan and South Korea in Tokyo on Wednesday, a statement from the US Department of State read that the three countries reaffirmed the need to maintain an inclusive, free and open Indo-Pacific, opposed unilateral attempts to change the status quo in the East China Sea, and emphasized the importance of preserving peace and stability in the Taiwan Straits. Stressing the North Korean nuclear issue, the statement from South Korea's foreign ministry did not record any China-related issues in the talks between the South Korean foreign minister and Sherman.

<https://www.globaltimes.cn/page/202107/1229408.shtml>

US turns cyberspace into another anti-China battlefield, 'futile to contain Beijing'

Chen Qingqing and Cao Siqi

Global Times, July 20, 2021

In an apparent attempt to contain China and as part of its ceaseless efforts to form an anti-China chorus among its major allies, the Biden administration is seeking to turn cyberspace into a new battlefield by ganging up with its allies to accuse China of conducting cyberattacks worldwide, an allegation that was swiftly denounced by Chinese diplomats, internet institutions and experts as China has always been a long-term victim of US cyberattacks. Such groundless accusations will not change the fact that the US remains the world's top spying empire with widespread

malfeasance in cyberspace, and some of its recent spying scandals even put some of its allies into an awkward position.

Along with the US, NATO, the European Union, Australia, Britain, Canada, Japan and New Zealand accused China of a global cyber espionage campaign, an unusually broad coalition of Western countries came together to publicly blame China for cyberattacks, according to media reports. Meanwhile, the US Department of Justice charged four Chinese nationals with targeting dozens of companies, universities and government agencies in the US and abroad, including three security officials and one contract hacker, Reuters said. Chinese embassies and diplomats quickly denounced the allegations, urging the US and its allies to stop bashing China on this subject, as the US has been a mastermind of cyberattacks for a long time.

A slew of internet research reports published previously show that the US Central Intelligence Agency (CIA) has been behind more than a decade of hacking activities targeting China's aerospace sector, scientific research institutions, internet companies, oil industry and government agencies. Such ill-intentioned tactics by the US by confusing right and wrong and orchestrating "hacker blame" with its allies is considered another step of the Biden administration in confronting and suppressing China at a larger scale.

<https://www.globaltimes.cn/page/202107/1229168.shtml>

China's space-tracking ship leaves for new Pacific mission

Xinhua, July 19, 2021

Space-tracking ship Yuanwang-5 departed from a port in east China's Jiangsu Province on Monday for a maritime monitoring mission in the Pacific Ocean. This is the third voyage of the ship in 2021 during which it has spent more than 150 days at sea. Before this voyage, crew members examined onboard facilities and replenished supplies. China's third-generation space-tracking ship has completed 75 missions at sea, including maritime tracking of the Shenzhou spacecraft, the Chang'e lunar probe and BeiDou satellites.

http://www.xinhuanet.com/english/2021-07/19/c_1310070588.htm

China, Russia must resolutely respond to arrogant US space goal: Global Times editorial

Global Times, July 18, 2021

According to US and UK media reports, the US is developing a Deep Space Advanced Radar Capability - or DARC - to locate a giant new radar system in Texas, the UK and Australia. The site in the UK would house 10 to 15 parabolic antennas (large satellite dishes) for tracking and four to six for transmitting, and each radar dish will be 15 meters in diameter. The system is said to be able to identify potential targets up to 36,000 kilometers away.

China and Russia must strongly oppose the US' efforts to extend the military competition among major powers into space and oppose its attempts to construct DARC with its allies.

China and Russia need to expose the US' shameless practice to further develop space warfare capabilities by hyping the so-called space threat from China and Russia. If the US adheres to such moves, China and Russia should take countermeasures, in a bid to strategically frustrate the US' ambitious plan. It has to be noted that it is much more difficult for the US to achieve hegemony in space than that on land and at sea. If the US dares to attack the space assets of China and Russia, the two countries can inflict the same loss on the US. Washington cannot develop the ability to unilaterally occupy outer space and close it to China and Russia.

However, by deploying DARC, the US can expand its lead in SSA. It will reinforce the impression that it "controls everything" through hegemony, consolidate its allies' confidence, and make vacillating countries and forces further yield to it. Just as the US established a global anti-missile system, the reliability of those systems cannot be verified. The world can hardly give it a chance, because such a moment means the extinction of humankind. The US developing these extreme systems that breaks the balance has had a large number of direct political effects. It has intensified the turbulence in relations between major powers and in global geopolitics. The US vision to build DARC has particularly sounded the alarm for China. China's space launch capabilities are getting stronger, and the country is increasing the frequency of its various space activities including efforts on a space station. The US is openly threatening the safety of these activities of China, speeding up the pace of constructing infrastructure and building certain capabilities to dominate the future space order. China must accelerate the building of its space counterattack capability and form a stronger deterrent to the US, in an attempt to resolutely suppress any impulse of the US to provoke a space conflict.

China has far fewer nuclear warheads than the US. But China's space capacity building can go faster with relatively fewer international obstacles. China can effectively weaken the US' strategic arrogance through strengthening its overall deterrence. In that case, China can force the US to face the reality and to some extent return to the mind-set of keeping the balance of power when Washington wants to establish overwhelming advantages. China must accelerate the pace to realize the convenience and cost-effectiveness of space launches, continue to systemize our space assets, strive to achieve the leading position in certain fields and projects, and dismantle the US' space advantage. We must not hesitate to invest in this field. It must be made clear that outer space security is becoming the new cornerstone of China's overall national security.

<https://www.globaltimes.cn/page/202107/1228977.shtml>

Chinese army faces problems in weapons innovation, relying on foreign acquisitions, US study finds

Owen Churchill

South China Morning Post, July 15, 2021

Rand Corporation calls China the 'clear pacing threat' to the US in terms of military capability but says much progress comes from intellectual property theft. A reliance on IP theft left Chinese weapons systems 'several years' behind the US, researchers concluded. China's

military has overcome numerous technological challenges to chip away at the United States' supremacy in recent years, but continues to be stymied by lagging domestic innovation and corruption in its defence industry, according to a US government-financed study released on Wednesday. The report by the Rand Corporation identified China as the "clear pacing threat" to the US in terms of investment in military capabilities but found that much of its progress was the result of intellectual property theft, foreign acquisitions and joint ventures. The Rand Corporation is a security-focused research group based in California that receives around 80 per cent of its funding from various federal agencies. The new report was sponsored by and prepared for the US Army.

<https://www.scmp.com/news/china/military/article/3141151/pla-faces-persistent-problems-innovative-weaponry-relying>