

Nuclear, Missile & Space Digest

Volume 16, Number 04

A Fortnightly Newsletter from the MP-IDSA

February 29, 2024

A. India

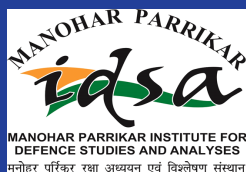
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- Hornet, Dragonfly drones debut at Saudi show
- Two Tu-160s perform flight over Arctic Ocean — Russian Defense Ministry
- New START to Expire in Two Years as Russia Refuses Talks
- Russia successfully puts satellite into orbit to serve defense needs — Defense Ministry

D. Europe

- France orders •1.1 billion of cannons, vehicles and helicopters
- Finland joins NATO operations with fighter jets, mine clearing vessel
- Germany announces new military aid package for Ukraine
- Lithuania requests Italy to supply spares for C-27 Spartan
- Turkey, Greece formally join German-led defense shield project
- Germany to Hike Defense Budget by Up to •10 Billion in 2024

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- NASA finishes 1st phase of ambitious lunar nuclear reactor project
- US to launch \$5 billion research hub in China chips race.
- US has new intelligence on Russian nuclear capabilities in space
- SpaceX launches U.S. missile-defense satellites
- SDA, MDA Announce Upcoming Launch Of The Tranche 0 Tracking And Hypersonic And Ballistic Tracking Space Sensor And Satellites
- US DoD boost missile tracking with L3Harris satellite launch

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- Iran unveils upgraded version of its Shafaq missile system
- Isfahan research reactor project reaches key milestone
- Iran Navy to hold joint exercise with Russia, China: Cmdr.
- Iran's Alborz destroyer returns home after Red Sea deployment
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- Maj. Gen. Rasoul confirms US strikes in Al Qaim and border areas of Iraq

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- Robotican to Distribute Ghost Robotics' Vision 60 Quadruped Unmanned Ground Vehicle in Israel

I. Qatar

- South Korea, Qatar defence ministers agree to boost military ties -Seoul

- Indonesia scraps plan to buy Mirage fighter jets from Qatar

J. Saudi Arabia

- Saudi Arabia to manufacture parts of Lockheed missile defense system
- Munitions India Limited Secures \$225 Million Defense Deal with Saudi Arabia
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- Saudi Arabia Unveils New SAMI 8x8 155mm Howitzer
- Saudi Arabia to Purchase Attack Drones from China

K. Türkiye

- Türkiye agrees to provide combat drones, other tech to Egypt
- Turkish drone magnate Baykar begins to build plant in Ukraine
- F-16 sale to Türkiye considered final as Congress review ends
- Türkiye, Greece intend to join European Sky Shield Initiative

L. Africa

- SA can be top nuclear technology exporter
- IAEA Empowers African Teachers with Educational Science Kits to Enhance Learning

M. South East Asia

- The Philippines: Advanced Tech for Disaster Resilience
- Nuclear regulatory overhaul signals gov't gearing up to hit 2,400-MW target by 2032
- Singapore builds AI model to 'represent' Southeast Asians

N. East Asia

- North Korea tests more cruise missiles as Kim Jong Un calls for war readiness
- Japan demonstrates floating seismic isolation system for SMRs
- Taiwan detects 14 mainland Chinese jets and drones carrying out 'combat readiness patrols' around island
- North Korea fires several cruise missiles in fifth barrage of 2024

A. India

Pressure vessel in place at Indian plant

World Nuclear news, February 5, 2024

The company said the installation was carried out on 24 January using the “open top” method, first used at Kudankulam 3. This involves installing the component while the reactor dome is still open, which can significantly cut the time taken to carry out the installation. On the day of the installation, the equipment was moved to a vertical position, then lifted by crane to a height of 50 metres and lowered into the reactor shaft of the reactor building.

The pressure vessel, weighing in at over 317 tonnes, was delivered from Volgodonsk in Russia to the Kudankulam construction site in 2023 as part of an “unprecedentedly complex and large-scale” simultaneous shipment of two reactor vessels and eight steam generators for plants under construction in India and China, according to Rosatom.

<https://www.world-nuclear-news.org/Articles/Pressure-vessel-in-place-at-Indian-plant>

India's installed nuclear power capacity is set to increase from 7480 MW to 2280

The Economic Times, February 7, 2024.

The Government informed the Lok Sabha that the present installed nuclear power capacity is set to increase from 7480 MW to 22800 MW by 2031-32. The aim of the government is to increase the share of nuclear power in total electricity generation in the country. These steps include the according of administrative approval and financial sanction to set up ten (10) indigenous 700 MW Pressurized Heavy Water Reactors (PHWRs) in Creation of Indian Nuclear Insurance Pool (INIP) for implementation of Civil Civil Liability for Nuclear Damage (CLND) Act, Amendment of the Atomic Energy Act to enable Joint Ventures of Public Sector Companies to set up nuclear power projects.

[https://energy.economictimes.indiatimes.com/news/power/indias-installed-nuclear-power-](https://energy.economictimes.indiatimes.com/news/power/indias-installed-nuclear-power-capacity-is-set-to-increase-from-7480-mw-to-22800-mw-by-2031-32-govt/107494625)

[capacity-is-set-to-increase-from-7480-mw-to-22800-mw-by-2031-32-govt/107494625](https://energy.economictimes.indiatimes.com/news/power/indias-installed-nuclear-power-capacity-is-set-to-increase-from-7480-mw-to-22800-mw-by-2031-32-govt/107494625)

India, Russia agree to strengthen bilateral nuclear cooperation

The Hindu, February 8, 2024

India and Russia have signed a protocol on amendments to the 2008 intergovernmental agreement on cooperation in construction of additional nuclear reactors in Kudankulam Nuclear Power Project site and in construction of Russia-designed nuclear power plants at new sites in India. During the two-day visit, the Russian delegation inspected the power units being constructed as the second and third stages of the KKNPP i.e., the construction of reactors 3 to 6 and discussed the long-term cooperation agenda. As a result of the negotiations, a significant document was signed under the joint Russian-Indian project, namely a protocol to the intergovernmental agreement on the construction of power units of the second and third stages of the Kudankulam NPP as of 2008.

<https://www.thehindu.com/news/national/india-russia-agree-to-strengthen-bilateral-nuclear-cooperation/article67825697.ece>

Kakrapar 4 gets go-ahead to increase power

World Nuclear News, February 12, 2024

The Indian regulator has given the go-ahead for the 700 MWe pressurised heavy water reactor (PHWR) to move to the next stage of commissioning and increase power to 50%. The unit reached first criticality in December.

The Atomic Energy Regulatory Board (AERB) issued Permission for the Phase-C Commissioning stage of Kakrapar Atomic Power Project Unit-4 (KAPP-4) on February 09, 2024, after a satisfactory Safety Review,” the Atomic Energy Regulatory Board said. The permit is valid until 30 June.

Phase-C commissioning will see the power of the reactor gradually increased in three stages as the reactor undergoes testing. The

first stage - C-1 - allows the unit to increase power to 50%. Phase C-2 will allow the power to be increased to 90%. The final stage will allow the power to be increased to 100%. Regulatory permission will be required to move from one stage to the next.

KAPP 4 is an Indian-designed and built 700 MWe pressurised heavy water reactor and is the second in a series of sixteen units such units, the first of which - Kakrapar unit 3 - was declared in commercial operation in mid-2023.

<https://www.world-nuclear-news.org/Articles/Kakrapar-4-gets-go-ahead-to-increase-power>

Modi to unveil 2 new units at Kakrapar nuclear power plant on Feb 22

The Indian Express, February 15, 2024

Prime Minister Narendra Modi will dedicate to the nation two new indigenously developed reactors at Kakrapar Nuclear Power Plant in Tapi district on February 22. He will also lay the foundation stone of the PM Mitra Park at Navsari, in addition to virtually inaugurating or laying the foundation of various development projects of the Surat Municipal Corporation.

The two new reactors – unit 3 and unit 4 – at Kakrapar Nuclear Power Plant have a capacity of 700 Megawatts (MW) each. One of the two new plants is already operational while the other will soon be in the coming days.

<https://indianexpress.com/article/cities/ahmedabad/modi-to-unveil-2-new-units-at-kakrapar-nuclear-power-plant-on-feb-22-9164093/>

B. China

PLA holds live-fire missile drill along southeastern coast, 'warns secessionists, external forces

People's Daily, February 1, 2024

PLA holds live-fire missile drill along southeastern coast, 'warns secessionists, external forces' Liu Xuanzun People's Daily, February 1, 2024. The Chinese People's Liberation Army (PLA) recently held a live-

fire missile exercise along the southeastern coast where it can cover the Taiwan Straits, sending a warning to "Taiwan independence" secessionists and external interference forces, experts said. The navy of the PLA Eastern Theater Command recently conducted an all-element anti-ship missile assault exercise in an eastern coastal region in East China's Fujian Province, with several transporter erector launchers commencing live-fire missile attacks, China Central Television (CCTV) reported. A range of spontaneous situations were simulated during the exercise, including emergencies such as power disruptions and hostile air strikes, in order to train fast reaction capabilities.

<http://en.people.cn/n3/2024/0201/c90000-20129786.html>

China's CXMT aims to build country's first advanced memory chips for AI

Nikkei Asia, February 1, 2024

ChangXin Memory Technologies (CXMT) is racing to produce China's first domestic high bandwidth memory, a critical component in artificial intelligence computing, as the country battles U.S. export controls and looks to reduce its reliance on foreign suppliers. CXMT has already ordered and received some manufacturing and test equipment from U.S. and Japanese suppliers that is suitable for assembling and producing HBM, sources with direct knowledge of the matter said.

<https://asia.nikkei.com/Business/Tech/Semiconductors/China-s-CXMT-aims-to-build-country-s-first-advanced-memory-chips-for-AI>

Int'l scientists conduct joint experiments with China's "artificial sun" team

Xinhua, February 2, 2024

As the Chinese New Year approaches, a small island in the northwest suburb of Hefei, capital of east China's Anhui Province, is buzzing not because of the fireworks, but because of the operation of

the Experimental Advanced Superconducting Tokamak (EAST), also known as the “Chinese artificial sun.” Before the upcoming Spring Festival, which falls on February 10, over 100 Chinese and foreign scientists conducted EAST-ITER (International Thermonuclear Experimental Reactor) joint physics experiments on the “Science Island,” which is home to EAST. The purpose of these experiments was to address relevant technical problems for the international nuclear fusion research and engineering megaproject ITER.

<https://english.news.cn/20240202/dbfc286699e846b9ba22ee395ed57fae/c.html>

Requirements for nuclear deterrence and arms control in a two-nuclear-peer environment

Atlantic Council, February 2, 2024

China’s rapid nuclear buildup is comprehensive, including both strategic and theater-range forces and the addition of an array of new capabilities. China is fielding a triad of strategic nuclear delivery systems, adopting a launch under attack (LUA) posture for its inter-continental ballistic missile (ICBM) force, and has tested potentially destabilizing new intercontinental range systems (e.g., fractional or multiple orbital bombardment systems [FOBS/MOBS] that could threaten a potentially unwarned pre-emptive attack on the United States). For the first time, China is developing survivable theater nuclear forces capable of conducting low-yield precision strikes on US and allied/partner forces and infrastructure across East Asia.

<https://www.atlanticcouncil.org/in-depth-research-reports/report/requirements-for-nuclear-deterrence-and-arms-control-in-a-two-peer-nuclear-peer-environment/>

China launches world’s first in-orbit AI commercial hypersatellite

CGTN, February 3, 2024

China’s Taiyuan Satellite Launch Center launched the world’s first in-orbit artificial intelligence (AI) commercial hypersatellite

on Saturday from waters off the coast of Yangjiang City in south China’s Guangdong Province. A Smart Dragon-3 (SD-3) carrier rocket blasted off from the launch site, sending a group of nine satellites, including the AI commercial hypersatellite and a distant retrograde orbit (DRO) satellite, into planned orbit. In addition, the SD-03 sent the Egyptian NExSat-1 satellite into orbit this time as well, marking its first international payload launch. Developed by Guoxing Aerospace Technology Co., Ltd. in Chengdu City of southwest China’s Sichuan Province, the AI commercial hypersatellite, named “Rongpiao” or “Xingshidai-18,” is a new integrated sensing network satellite equipped with the company’s sixth generation “satellite brain” system.

<https://news.cgtn.com/news/2024-02-03/China-launches-9-satellites-from-sea-including-one-DRO-satellite-1qTeeAlUbSM/p.html>

China launches Geely-02 satellites

Xinhua, February 3, 2024

China sent a group of 11 satellites into space from the Xichang Satellite Launch Center in southwestern Sichuan Province. Carried by a Long March-2C carrier rocket, the 11 Geely-02 constellation satellites took off from the launch site, and entered the preset orbit. This was the 508th flight mission of the Long March rocket series. The Long March-2C carrier rocket was developed by the China Academy of Launch Vehicle Technology, which is affiliated with the China Aerospace Science and Technology Corporation. It is a type of liquid launch vehicle capable of launching a single satellite, multiple satellites and satellite constellations in various configurations.

<https://english.news.cn/20240203/8fc0caa1c52b42f2a29f8b728cf07d64/c.html>

China Mobile launches the world’s first 6G test satellite

China Daily, February 5, 2024

China Mobile, the world’s largest telecom carrier by mobile subscribers, has

successfully launched the world's first satellite to test 6G architecture, marking a milestone in its efforts to explore integrated space and ground communication technology. The low-earth orbit test satellite is the world's first to employ 6G design architecture, and it was launched along with another satellite that comes with China Mobile's 5G technology. The 6G test satellite hosts a distributed autonomous architecture for 6G, which was jointly developed by China Mobile and the Chinese Academy of Sciences' Innovation Academy for Microsatellites.

<https://www.chinadaily.com.cn/a/202402/05/WS65c078e3a3104efcbdae9c1c.html>

Beijing steps up commercial aerospace efforts

CGTN, February 5, 2024

The municipal government of Beijing is planning the establishment of a dedicated "Rocket Street" as a research and production hub for the advancement of commercial aerospace. It is part of the capital city's ongoing endeavours to foster innovation in the industry. Beijing had laid out measures for the development of a satellite internet industry and provided support for 41 commercialization launch projects, with funding exceeding 100 million yuan (\$14.08 million), Jiang Guangzhi, director of Beijing Municipal Bureau of Economy and Information Technology, said at a conference.

<https://news.cgtn.com/news/2024-02-05/Beijing-steps-up-commercial-aerospace-efforts-1qWirCSpXag/p.html#:~:text=The%20municipal%20government%20of%20Beijing,foster%20innovation%20in%20the%20industry.>

'Nowhere to hide': Chinese scientists develop game-changing military surveillance device for electronic warfare

South China Morning Post, February 6, 2024

An enemy in the battlefield will have "nowhere to hide" after Chinese scientists claim to have made a huge technological

breakthrough in the field of electronic warfare. The team of scientists from Beijing said for the first time they have achieved seamless, wide bandwidth, real-time monitoring and analysis of the electromagnetic spectrum, leaving any enemy completely out in the open during a conflict. The Chinese military will be able to use this technology to detect and lock on to enemy signals at unprecedented speeds, decode the physical parameters of these signals almost instantly, and effectively suppress them – all while ensuring the smooth flow of their own communications, according to the researchers.

<https://www.scmp.com/news/china/science/article/3250752/nowhere-hide-chinese-scientists-develop-game-changing-military-surveillance-device-electronic>

PRC State-sponsored actors compromise and maintain persistent access to U.S. critical infrastructure

Cybersecurity & Infrastructure Security Agency, February 7, 2024

The Cybersecurity and Infrastructure Security Agency (CISA), National Security Agency (NSA), and Federal Bureau of Investigation (FBI) assess that People's Republic of China (PRC) state sponsored cyber actors are seeking to pre-position themselves on IT networks for disruptive or destructive cyberattacks against U.S. critical infrastructure in the event of a major crisis or conflict with the United States. The U.S. authoring agencies have confirmed that the PRC state-sponsored cyber group known as Volt Typhoon has compromised the IT environments of multiple critical infrastructure organizations – primarily in Communications, Energy, Transportation Systems, and Water and Wastewater Systems Sectors – in the continental and non-continental United States and its territories, including Guam.

<https://www.cisa.gov/news-events/cybersecurity-advisories/aa24-038a>

U.S. engineer contacted China before stealing missile tracking tech, DOJ says Dan Mangan

CNBC, February 7, 2024

Federal prosecutors charged Chenguang Gong who worked at a Los Angeles-area company with stealing trade secret technologies developed for use by the U.S. government in space to detect nuclear missile launches and track ballistic and hypersonic missiles, the Department of Justice said. Gong, who lives in San Jose, California, is a native of China who became an American citizen in 2011, prosecutors said. Los Angeles U.S. Attorney Martin Estrada said Gong previously sought to provide the People's Republic of China with information that would help the nation's military. Gong, from 2014 through 2022, submitted multiple applications for so-called "talent programs" run by the Chinese government. The Chinese Talent Program Tracker is known to identify individuals located outside China who have skills and knowledge that can help transform the Chinese economy and bolster its military capabilities, the complaint said.

<https://www.cnn.com/2024/02/07/doj-us-engineer-contacted-china-before-stealing-missile-tech.html>

China opens Qinling Station for Antarctic scientific investigation

CGTN, February 7, 2024

China's fifth scientific outpost in the Antarctic, Qinling Station, was officially named and opened. Qinling station is the third Chinese research base in Antarctica able to operate all year, hosting up to 80 people in the summertime and 30 during wintertime. The new facility, constructed on the rocky, windswept Inexpressible Island near the Ross Sea of the Antarctic, utilizes an integrated spatial system and green technology given the unique environmental conditions at the site. As of 2024, China has built five Antarctic research stations, spanning over 30 years of research.

<https://news.cgtn.com/news/2024-02-07/China-s-5th-Antarctic-research-station-opens-1qZGvcjIKz6/p.html>

Thinking about the unthinkable: five nuclear weapons issues to address in 2024

Centre for Strategic and International Studies, February 9, 2024

China's rapid expansion and diversification of its nuclear forces also demands attention in 2024. While the administration has made clear that "the United States does not need to increase our nuclear forces to outnumber the combined total of our competitors in order to successfully deter them," a number of recent high-profile commissions, reports, and studies argue for important changes to U.S. nuclear forces, setting up a renewed debate over what's driving China's nuclear buildup and whether and how the United States should respond.

<https://www.csis.org/analysis/thinking-about-unthinkable-five-nuclear-weapons-issues-address-2024>

For the US, China is a partner rather than a foe in the new AI game

Global Times, February 11, 2024

In recent days, China and the US have agreed to launch the first meeting of the China-US intergovernmental dialogue mechanism on artificial intelligence (AI) this spring. It is an implementation of the consensus Chinese and the US leaders reached in San Francisco in November, among which both sides agree to establish China-US government talks on AI. However, the US relentless crackdown on China's tech industry has made the prospect of meaningful cooperation more uncertain. Unilateral sanctions on AI-related technology and equipment have been imposed, chip export to China controlled, and even Chinese AI model training access to US cloud space was restricted.

<https://www.globaltimes.cn/page/202402/1306996.shtml>

China's new microwave weapon made to zap Taiwan

Asia Times, February 12, 2024

In what may be the first of its kind, Chinese scientists have unveiled a new Stirling engine-powered high-power microwave (HPM) weapon, marking a significant leap in directed-energy warfare technology with possible applications in future urban warfare scenarios. China claims that it is the world's first openly reported HPM weapon based on Stirling engine technology. The weapon system, which can easily fit into a truck, boasts a significant reduction in energy consumption for generating a strong magnetic field compared with existing technologies. According to preliminary tests, China claims it consumes only one-fifth of the energy required by current methods and can operate continuously for four hours.

<https://asiatimes.com/2024/02/chinas-new-microwave-weapon-made-to-zap-taiwan/>

China's shipyards are ready for a protracted war. America's aren't.

The Wall Street Journal, February 13, 2024

China emerged as a global power by turning itself into the world's factory floor. It is expanding that power, and its military might, with another striking industrial feat: becoming the world's shipyard. More than half of the world's commercial shipbuilding output came from China last year — making it the top global shipmaker by a wide margin. The once-prolific shipyards of the West that helped forge empires, expand trade and win wars have shriveled. "The scale [of China's shipbuilding] is just almost hard to fathom," said Thomas Shugart, an adjunct senior fellow at the Center for a New American Security whose research focuses on maritime competition. "The degree to which it dwarfs American shipbuilding is just unbelievable."

<https://www.wsj.com/world/china/chinas-shipyards-are-ready-for-a-protracted-war-americas-arent-d6f004dd>

China as the second nuclear peer of the United States

Finnish Institute of International Affairs, February 13, 2024

China's conventional and nuclear build-up complicates the success of NATO's strategy in both the nuclear and the conventional realm: 1) instead of only one, US nuclear forces will have to deter two nuclear peers in the 2030s, and 2) China's increasing conventional military power will necessitate an increased US presence in the Indo-Pacific. Both factors will strain US resources. The quantitative leap in China's nuclear capability is accompanied by a qualitative one. First, China is building an early-warning and command and control system that will make its strategic nuclear forces more survivable and responsive. Second, it has a growing arsenal of precision-guided nuclear-capable missiles, some of which may later be armed with lower-yield nuclear warheads, which the US assesses may be under development.

<https://www.fiia.fi/en/publication/china-as-the-second-nuclear-peer-of-the-united-states#:~:text=FIIA%20Briefing%20Paper,-Is%20a%20concise&text=China's%20nuclear%20build%20will,major%20war%20at%20a%20time.>

China is quietly reducing its reliance on foreign chip technology

The Economist, February 13, 2024

From consumer gadgets to cars, China has shown a knack for producing cutting-edge technology. Yet the semiconductors that power the digital economy have proved trickier to master. That has been the source of much anxiety among its political and business elites in recent years. America's decision in 2022 to halt exports to the country of its whizziest chips and chipmaking tools brought into stark relief the chokehold of China's geopolitical rivals over the industry. In December last year China's imports of the lithography

machines used to imprint circuits onto silicon wafers surged by 450%, year on year, as local chipmakers raced to buy advanced kit from asml, the Dutch market leader, before export restrictions by the Netherlands came into effect in January. It has also been hoovering up semiconductor equipment from Japan.

<https://www.economist.com/business/2024/02/13/china-is-quietly-reducing-its-reliance-on-foreign-chip-technology>

China's Yuanwang fleet, Long March-8 rocket set sails for next lunar probe

Global Times, February 15, 2024

China space has not ceased its advancement during the Chinese New Year holidays, as the Yuanwang-22 spacecraft tracking vessel is expected to reach a port in Wenchang, South China's Hainan Province, in the run-up for the coming launching mission for Queqiao-2 relay satellite, a key component for the country's Phase-4 lunar probe missions. The Long March-8 Y3 rocket, the launch vehicle commissioned for the Queqiao-2 relay satellite launch mission, has also been transferred to the transport vessel and set sail for Wenchang, the Global Times has learned from the rocket developer China Academy of Launch Vehicle Technology.

<https://www.globaltimes.cn/page/202402/1307096.shtml#:~:text=The%20Long%20March%2D8%20Y3,Academy%20of%20Launch%20Vehicle%20Technology>

NTI experts participate in China-U.S. Track II dialogue on Nuclear Security

Nuclear Threat Initiative, February 15, 2024

From January 25-26, 2024, experts from NTI and the China Arms Control and Disarmament Association (CACDA) gathered at the State Nuclear Technology Centre (SNSTC) outside of Beijing for the first in-person meeting of the China-U.S. Track II Dialogue on Nuclear Security since the COVID-19 pandemic. Since its inception in 2018, the China-U.S. Track II Dialogue on Nuclear Security has continued to

provide valuable opportunities to exchange insights, build relationships, and develop a shared vision for strengthened nuclear security cooperation between the two countries. The dialogue touched on a range of important nuclear security issues and provided opportunities for an exchange of views between the two delegations.

<https://www.nti.org/news/nti-experts-participate-in-china-u-s-track-ii-dialogue-on-nuclear-security#:~:text=From%20January%2025%2D26%2C%202024,since%20the%20COVID%2D19%20pandemic>

C. Russia

Russia to showcase Serp counter-UAV complex in Saudi Arabia

TASS, February 2, 2024

Rostec Corporation said it would showcase Serp-VS6 counter-UAV complex at the World Defense Show 2024 in Saudi Arabia.

Serp-VS6 and accompanying equipment are carried in several cases and are deployed in 30 minutes. The complex can be mounted on a mobile platform. Serp protects a territory against drones in a radius of 5 km and can effectively counter a swarm of drones. The viewing angle is regulated by 90-degree sectors with independent operational regimes that do not impede friendly drones. Serp jams drone control channels and disrupts the operation of onboard receiver of satellite navigation systems. The operator loses control of the vehicle, while the drone is no longer capable to fulfil the mission.

<https://tass.com/defense/1740743>

Flight tests of cutting-edge BrahMos-NG missile to start before end of 2025 – company

TASS, February 6, 2024

Flight tests of the Russian-Indian new generation cruise missile BrahMos-NG will start by the end of 2025, General Manager for Market Promotion & Export of BrahMos Aerospace Praveen Pathak told TASS at the World Defense Show.

"In parallel with construction of the plant scheduled to start operations in late 2025 - early 2026, first flight specimens of the new BrahMos-NG missile will be assembled for flight tests. They are planned to be assembled, and flight tests will start by the end of 2025," Pathak said.

<https://tass.com/defense/1742259>

Hornet, Dragonfly drones debut at Saudi show

TASS, February 6, 2024

Russia is for the first time demonstrating abroad Hornet and Dragonfly quadcopters adapted to ten types of munitions engaged in Ukraine operation at the World Defense Show 2024 in Saudi Arabia, the Academy BAS designer company told TASS.

"Hornet and Dragonfly are for the first time displayed abroad. They are successfully engaged in the special operation to release various munitions, as well as remotely mine trails and the routes of columns and armor. It is important that the platforms are adapted for a broad range of munitions. Ten types of munitions have been mastered so far. There is a module and a release system for each of them. We have spent a lot of time to adapt the payload so that it is convenient for the military," it said.

<https://tass.com/defense/1742525>

Two Tu-160s perform flight over Arctic Ocean – Russian Defense Ministry

TASS, February 6, 2024

Two Tupolev-160 strategic bombers have performed a scheduled flight over the international waters of the Arctic Ocean and the Laptev Sea. The Russian Defense Ministry said the flight was carried out in strict compliance with international rules. Lieutenant-General Sergey Kobylash, the commander of long-range aviation, noted that "the flight was carried out in strict compliance with international rules of using airspace."

He added that long-range aviation pilots regularly fly over the international waters

of the Arctic, the North Atlantic, the Black and Baltic Seas, and the Pacific Ocean.

<https://tass.com/defense/1742591>

New START to Expire in Two Years as Russia Refuses Talks

Arms Control Association, 7 February, 2024

With less than two years to go before the expiration of the last remaining treaty limiting the world's two largest arsenals, Russian leaders continue to reject U.S. offers to discuss a new nuclear arms control framework.

In late December, Russia sent a diplomatic paper rejecting the United States' proposal to resume arms control talks, according to U.S. officials, and Russia's foreign minister announced Jan. 18 that Russia was interested in talks on a new arms control framework to supersede the New Strategic Arms Reduction Treaty (New START), which expires Feb. 5, 2026.

<https://www.armscontrol.org/blog/2024-02/nuclear-disarmament-monitor>

Russia successfully puts satellite into orbit to serve defense needs – Defense Ministry

TASS, February 9, 2024

A satellite intended to serve the needs of Russia's Defense Ministry has reached its intended orbital path after being launched earlier on Friday from the Plesetsk spaceport in the country's northwest by a Soyuz-2.1v rocket, the Defense Ministry said.

"At the estimated time, the spacecraft was launched into orbit and taken under the control of ground-based facilities of the Russian Aerospace Forces," the ministry said in a statement. "Stable telemetry communication has been established and maintained with the spacecraft, while its onboard systems are functioning normally," it added.

<https://tass.com/defense/1744227>

D. Europe

France orders •1.1 billion of cannons, vehicles and helicopters

Defense News, February 2, 2024

France's Defence Procurement Agency ordered more than •1.1 billion (U.S. \$1.2 billion) of self-propelled howitzers, armored vehicles and helicopters as part of the country's plan to modernize its armed forces through to 2030.

The agency is buying 109 new-generation Caesar truck-mounted howitzers from Nexter Systems, a unit of KNDS, for about •350 million, the agency, known as DGA, said in a statement late Thursday. The orders placed in December also include Serval armored troop carriers from KNDS and Texelis and eight additional NH90 helicopters for the French special forces.

<https://www.defensenews.com/global/europe/2024/02/02/france-orders-11-billion-of-cannons-vehicles-and-helicopters/>

Finland joins NATO operations with fighter jets, mine clearing vessel

The Economic Times, February 2, 2024

Finland will send up to eight fighter jets and a mine hunting navy vessel to take part in NATO's joint operations in 2024, the country's defence ministry said on Friday.

The Nordic nation last year joined the Western military alliance in a historic security policy U-turn in response to neighbouring Russia's invasion of Ukraine.

"Allies participating actively in NATO's peacetime collective defence missions sends a message of unity and reinforces deterrence," Defence Minister Antti Hakkanen said in a statement.

<https://economictimes.indiatimes.com/news/defence/finland-joins-nato-operations-with-fighter-jets-mine-clearing-vessel/articleshow/107359568.cms?from=mdr>

Germany announces new military aid package for Ukraine

Anadolu Ajansi, February 7, 2024

The German government announced a new military aid package for Ukraine, including the delivery of 105 Leopard 1A5 tanks and 30 Marder infantry fighting vehicles, local media reported on Wednesday.

Germany has already provided Ukraine with 30 Leopard 1, 90 Marder infantry fighting vehicles, and 18 Leopard 2-A6 tanks since spring 2023.

The majority of the latter are currently in a repair workshop in Lithuania, the Frankfurter Rundschau daily said.

The promised 30 Leopard 1 tanks come from old industrial and Bundeswehr stocks and are currently being completely overhauled by Rheinmetall, a German arms company.

According to the government's website, Germany also plans to deliver 15 more Gepard anti-aircraft gun tanks and nine IRIS-T SLM air defense systems to protect Ukrainian cities from Russian missile attacks.

<https://www.aa.com.tr/en/europe/germany-announces-new-military-aid-package-for-ukraine/3130622>

Lithuania requests Italy to supply spares for C-27 Spartan

Airforce Technology, February 9, 2024

Lithuania's Minister of National Defence Arvydas Anušauskas met the new Italian ambassador to the Baltic nation HE Emanuele de Maigret on 8 February, 2024. The minister requested Italy's assistance in supplying spare parts for the Spartan transport aircraft in a timely manner.

The primary roles of the C-27J are cargo transport, troop transport, and material and paratroop air drop. Other missions

include maritime patrol, tactical operations, medical evacuation, ground refuelling, fire-fighting and aerial spraying.

<https://www.airforce-technology.com/news/lithuania-requests-italy-to-supply-spares-for-c-27-spartan/>

Turkey, Greece formally join German-led defense shield project

Al-Monitor, February 15, 2024

Turkey, along with its Aegean frenemy Greece, on Thursday formally joined a German-led defense initiative aiming to set up an integrated European missile defense system.

Turkish Defense Minister Yasar Guler described the European Sky Shield Initiative (ESSI) as an "important step towards fulfilling NATO's necessities," speaking after the signing ceremony held on the sidelines of a NATO summit in Brussels.

<https://www.al-monitor.com/originals/2024/02/turkey-greece-formally-join-german-led-defense-shield-project>

Germany to Hike Defense Budget by Up to •10 Billion in 2024

Bloomberg, February 15, 2024

Germany is poised to increase its defense budget by as much as •10 billion (\$10.7 billion) next year to help fund additional spending needs triggered by Russia's war on Ukraine, according to people familiar with the plans.

Defense Minister Boris Pistorius is pushing for the extra cash in the 2024 finance plan, which would lift the total allocated to •60 billion, said the people, who asked not to be identified discussing confidential information.

<https://www.bloomberg.com/news/articles/2023-02-15/germany-to-lift-defense-spending-by-up-to-10-billion-next-year>

E. The United States of America

NASA finishes 1st phase of ambitious lunar nuclear reactor project

The Indian Express, February 7, 2024

NASA this week announced that it is wrapping up the initial phase of its ambitious plan to build a small electricity-generating nuclear reactor on the Moon that could be used in future missions and outposts on the Moon. The space agency in 2022 also awarded three \$5 million contracts to private companies, tasking them with developing an initial design that included the reactor, its power conversion, heat rejection, power management and distribution systems, estimated costs and a development schedule. This nuclear reactor could play an important role in bolstering NASA's ambitions to have a sustained human presence on the Moon for at least 10 years.

<https://indianexpress.com/article/technology/science/nasa-lunar-moon-nuclear-fission-reactor-9141960/>
#:~:text=NASA%20this%20week%20announced%20that%20outposts%20on%20the%20Moon.

US to launch \$5 billion research hub in China chips race.

Bloomberg, February 9, 2024

President Joe Biden's administration plans to launch a \$5 billion semiconductor research consortium to bolster chip design and hardware innovation in the US and counter China's efforts to capture the cutting edge of the industry. Officials are working to prevent China from benefiting from NSTC-funded research while filling gaps in the US research ecosystem for key areas like packaging and hardware, she said, as electronic components have become a key US-China battleground. "They're investing quite a few dollars on chip design and chip manufacturing in

China right now, as our main competitor,” Locascio said.

<https://www.bloomberg.com/news/articles/2024-02-09/us-to-launch-5-billion-research-hub-to-stay-ahead-in-chip-race>

US has new intelligence on Russian nuclear capabilities in space

CNN, 14 February, 2024

The US has new intelligence on Russian military capabilities related to its efforts to deploy a nuclear anti-satellite system in space, according to multiple sources familiar with the intelligence.

The intelligence was briefed to Congress and key US allies, and some lawmakers say it is serious enough that it should be declassified and made public. While the intelligence is concerning, multiple senior members of Congress briefed on the information on Wednesday emphasized that it does not pose an immediate threat to the US or its interests.

The system remains under development and is not yet in orbit, according to three US officials familiar with the intelligence. It's not clear how far the technology has progressed, one of the officials said. A separate US official told CNN the threat does not involve a weapon that would be used to attack humans.

<https://edition.cnn.com/2024/02/14/politics/house-intel-chairman-serious-national-security-threat/index.html>

SpaceX launches U.S. missile-defense satellites

Space News, February 14, 2024

SpaceX launched a U.S. military classified mission Feb. 14, sending to orbit six missile-detection satellites: two for the Missile Defense Agency and four for the Space Development Agency.

The mission, named USSF-124, flew to low Earth orbit on a Falcon 9. The rocket lifted off at 5:30 p.m. Eastern from Launch Complex 40 at Cape Canaveral Space Force Station, Florida.

The payload included five satellites made by L3Harris Technologies and one made by Northrop Grumman.

<https://spacenews.com/spacex-launches-u-s-missile-defense-satellites/>

SDA, MDA Announce Upcoming Launch Of The Tranche 0 Tracking And Hypersonic And Ballistic Tracking Space Sensor And Satellites

Space Development Agency, February 14, 2024

The Missile Defense Agency (MDA) and Space Development Agency (SDA) announce the upcoming launch of six satellites into low-Earth orbit from Space Launch Complex 40 at Cape Canaveral Space Force Station, Florida.

“This launch represents a pivotal time for MDA as we enter a new phase of missile warning, tracking and defense,” said Lt. Gen. Heath Collins, director of MDA. “These HBTSS satellites are an essential step forward in our efforts to stay ahead of our adversaries.”

MDA, the U.S. Space Force and SDA are collaborating to develop HBTSS as a space sensor prototype demonstration providing fire control quality data required to defeat advanced missile threats. Ultimately, this data is critical to enabling engagement by missile defense weapons, including engagement of hypersonic glide-phase weapons. This “birth-to-death” tracking by HBTSS will make it possible to maintain custody of missile threats from launch through intercept regardless of location.

<https://www.sda.mil/sda-md-a-announce-upcoming-launch-of-the-tranche-0-tracking-and-hypersonic-and-ballistic-tracking-space-sensor-and-satellites/>

US DoD boost missile tracking with L3Harris satellite launch

Airforce Technology, 15 February, 2024

The US Department of Defense (DoD) has successfully launched five satellites designed by L3Harris Technologies.

Led by the Missile Defense Agency's (MDA) Hypersonic and Ballistic Tracking Space Sensor (HBTSS) program and the Space Development Agency's (SDA) Tranche 0 (T0) Tracking Layer program, the deployment aims to improve the surveillance and tracking capabilities of the nation's defence apparatus.

These satellites represent a shift in monitoring manoeuvring hypersonic missiles, effectively extending the range of current ballistic missile detection systems.

<https://www.airforce-technology.com/news/us-dod-boost-missile-tracking-with-l3harris-satellite-launch/>

F. Iran

Iran kicks off construction of new nuclear plant

Tehran Times, February 2, 2024

Iran has begun to build a new nuclear power plant in the southern coastal province of Hormozgan with an investment of \$15 billion, according to the head of the Atomic Energy Organization of Iran (AEOI).

During a visit to the Hormozgan province, Mohammad Eslami, at the behest of Iranian President Ebrahim Raeisi, announced the commencement of construction of the new nuclear plant in Hormozgan.

The president launched the project via video call. He emphasized the significance of the power plant as a vital infrastructure for the country's economy and development, praising the efforts of skilled Iranian experts and expressing hope that the project would bring prosperity to the Iranian people.

Eslami highlighted that the project called "Iran-Hormoz", is part of the country's national plans to develop its nuclear industry over the next two decades.

<https://www.tehrantimes.com/news/494452/Iran-kicks-off-construction-of-new-nuclear-plant>

Iran unveils upgraded version of its Shafaq missile system

IRNA, February 3, 2024

At the unveiling ceremony on Saturday, General Mousavi also unveiled a nightvision device called Yusuf.

Shafaq is a long-range smart precision missile system that can hit the target in a radius of 20 kilometers.

The airborne and anti-armour missile systems and the Yusuf night vision device have been designed and made by experts in Iran's Aerospace Force.

Shafaq missiles are of the fire-and-forget type. They are also capable of carrying out operations in extreme weather conditions and during day and night. The missiles can also be installed on the Iranian Army's various types of helicopters.

<https://en.irna.ir/news/85374673/Iranunveils-upgraded-version-of-its-Shafaqmissile-system>

Isfahan research reactor project reaches key milestone

Tehran Times, February 5, 2024

The head of Atomic Energy Organization of Iran (AEOI) announces the commencement of concrete pouring for the country's fourth research reactor, located in the city of Isfahan.

AEOI head Mohammad Eslami hailed Isfahan as "one of the pillars of Iran's nuclear industry" while celebrating the achievement. He described the start of construction as "an extraordinary value chain."

Eslami further emphasized the project's importance by highlighting its connection to critical medical applications.

He said that the reactor's main function will be to produce tellurium hexafluoride, a key material for generating iodine-131,

a radiopharmaceutical used for diagnosing and treating thyroid conditions.

<https://www.tehrantimes.com/news/494584/Isfahan-research-reactor-project-reaches-key-milestone>

Iran Navy to hold joint exercise with Russia, China: Cmdr.

IRNA, February 5, 2024

"Iran's joint naval exercise with Russia and China will be held by the end of the year, although other countries have also been invited to participate in this exercise," Rear Admiral Shahram Irani said on Monday.

Irani said preserving and protecting the interests and economic resources of the Islamic Republic is the most important mission of the Iranian Navy.

"This exercise will be carried out with the aim of protecting the security of the region and common interests," he added.

The commander further said that the Navy, in cooperation with the Ministry of Defense and the Armed Forces, plans to add several ships to its naval fleet by mid-March.

<https://en.irna.ir/news/85377721/IranNavy-to-hold-joint-exercise-with-RussiaChina-Cmdr>

Iran's Alborz destroyer returns home after Red Sea deployment

IRNA, February 10, 2024

The Iranian Navy's 94th flotilla of warships, which includes the Alborz destroyer, was welcomed by Navy commanders in the 1st Naval Region based in Bandar Abbas, the southern Hormozgan Province, on Saturday.

Rear Admiral Farhad Fattahi, a senior navy commander in the 1st Naval Region, welcomed the flotilla and its staff.

"The presence of the Navy's strategic naval fleets in the Gulf of Aden and the Red Sea...brings pride to the great nation of Iran and is a thorn [in the side] of the humiliated enemies of the Iranian nation," the commander said.

The flotilla was deployed to the Red Sea amid rising tensions in the region over the

Israeli regime's genocidal war on the Gaza Strip.

<https://en.irna.ir/news/85382878/Iran-s-Alborz-destroyer-returns-home-after-RedSea-deployment>

IRGC fires ballistic missile from warship for first time

IRNA, February 13, 2024

A Zolfaghar-class ballistic missile was launched from Shahid Mahdavi aircraft carrier on Monday and hit its designated target in a desert in central Iran, IRNA reported on Tuesday.

With a range of 750 kilometers, Zolfaghar is the latest joint achievement of the IRGC Navy and the IRGC Aerospace Force.

The IRGC warships will now be capable of carrying different types of ballistic missiles with a range of up to 1,750 kilometers.

<https://en.irna.ir/news/85385874/IRGCfires-ballistic-missile-from-warship-for-first-time>

G. Iraq

Maj. Gen. Rasoul confirms US strikes in Al Qaim and border areas of Iraq

Iraqi News Agency, February 3, 2024

The spokesperson for the Commander-in-Chief of the Armed Forces, Major General Yahya Rasoul, reported that the cities of AlQaim and the Iraqi border areas were subjected to American air strikes, while he considered these strikes a violation of Iraqi sovereignty. "The cities of Al-Qaim and the Iraqi border areas are being subjected to air strikes by United States aircraft, as these strikes come at a time when Iraq is striving to ensure the stability of the region," Major General Rasoul said in a statement received by the Iraqi News Agency (INA).

<https://ina.iq/eng/31209-majgen-rasoulconfirms-us-strikes-in-al-qaim-and-borderareas-of-iraq.html>

H. Israel

Elbit Showcases Rock 6x6 UGV at UMEX 2024

Israel Defense, February 1, 2024

Israeli Elbit Systems showcased At the UMEX 2024 exhibition held in Abu Dhabi, a week ago, the Rook Unmanned Ground Vehicle (UGV), Developed in partnership with the Israeli company Roboteam.

Armyrecognition.com website tells that the Rook UGV was introduced to the public in November 2021. It is part of the Legion-X family of UGVs and leverages the operational experience gained from Roboteam's Probot UGV, which is currently employed by several military forces. The Rook UGV is a robotic unmanned ground vehicle designed with an open architecture, facilitating easy integration of different payloads and ensuring compatibility. One of its notable features is its integration with the Legion-X system, enabling it to operate autonomously or as part of a coordinated swarm of multiple unmanned vehicles. The Rook offers dual operational modes, allowing for teleoperation or fully autonomous and beyond-line-of-sight (BLOS) operations.

<https://www.israeldefense.co.il/en/node/61112>

Iron Waves: Israel's Missile Boat Flotilla in Action

Israel Defense, February 8, 2024

The Israeli Navy defines three missions for its missile boat flotilla, known as the Flotilla 3 ("Shayetet 3" in Hebrew): to fight the enemy at sea, to prevent a naval blockade on the State of Israel, and to assist ground forces in sea-based attacks.

The missile boats fulfilled the third mission from the outset of the Swords of Iron War, and the task has not yet been completed. They are still at sea, patrolling off the Gaza Strip's shores – as well as off Israel's northern coast and the Red Sea. Lieutenant Colonel Steven, a division commander in Flotilla 3, prepared to celebrate the holiday of Simchat Torah with his family on October 7th, but then the phone rang at 06:45 am. He hurried to the flotilla's naval base and

set sail, initially with two out of the five ships in the flotilla he commands. His unit comprises four Sa'ar 4.5-class missile boats and a detection ship tasked with underwater threat detection and maritime rescue missions.

<https://www.israeldefense.co.il/en/node/61170>

Estonia to Receive Israel Aviation Industry Assault Missiles

Israel Defense, February 11, 2024

The Estonian Ministry of Defense has approved the adoption of the BLUE SPEAR anti-ship missile system. Blue Spear missiles are a fifth-generation version of the "Gabriel" missile, known to have been developed and manufactured in cooperation between Israel Aviation Industry (IAI), Proteus, and ST Engineering.

These missiles are designed to target naval vessels within a range of 290 kilometers for both sea and shore targets. The system is expected to significantly enhance Estonia's defense capabilities and cover the entire Baltic Sea.

<https://www.israeldefense.co.il/en/node/61184>

Dutch Court Orders Netherlands to Stop Delivery of F-35 Parts to Israel

Israel Defense, February 12, 2024 A Dutch appeals court ordered the government to block all exports of F-35 fighter jet parts to Israel within seven days, citing concerns of inappropriate usage by Israel during its ongoing war with Hamas. According to the court, "It is undeniable that there is a clear risk the exported F-35 parts are used in serious violations of international humanitarian law," the court said.

The case against the Netherlands was brought before the court in November 2023 by several human rights organizations, including the Dutch branches of Amnesty International and Oxfam. The appeal was submitted after a local court rejected the petition.

<https://www.israeldefense.co.il/en/node/61204>

Israeli Defense Ministry to Purchase Hundreds of Armored Vehicles

Israel Defense, February 13, 2024

The Israeli Ministry of Defense embarked on the procurement process of over 200 armored security vehicles for the local defense forces in the Gaza periphery area, northern Israel, and Judea and Samaria (the West Bank), for a total of approximately NIS 150 million.

According to the official government statement, this procurement follows the request of the Home Front Command, and is intended to strengthen the resilience of the communities and rapid-response units by enabling them to patrol the areas they are defending and provide a rapid response in times of security incidents.

<https://www.israeldefense.co.il/en/node/61214>

Robotican to Distribute Ghost Robotics' Vision 60 Quadruped Unmanned Ground Vehicle in Israel

Israel Defense, February 13, 2024

Robotican, an Israeli innovator in autonomous technology, announced its collaboration with Ghost Robotics, a renowned name in the field of robotics. Robotican has become the exclusive distributor of Ghost Robotics' products, particularly the Vision 60 Quadruped Unmanned Ground Vehicle (Q-UGV), in Israel.

According to Robotican, the Ghost Robotics V60 Q-UGV is not just a robotic platform; it is designed to contribute to army efforts on the battlefield and beyond. Its features, including the ability to enter dangerous places and minimize human casualties, make it an invaluable asset on the modern battlefield. In an evolving warfare environment, blending high-tech solutions with traditional methods is crucial, and the V60 excels at bridging that gap.

<https://www.israeldefense.co.il/en/node/61210>

I. Qatar

South Korea, Qatar defence ministers agree to boost military ties -Seoul

Reuters, February 7, 2024

The defence ministers of South Korea and Qatar have agreed to expand joint military training and strengthen bilateral cooperation, Seoul's defence ministry said on Wednesday, amid a push by Seoul to boost global arms sales. Seoul's defence minister Shin Won-sik met his counterpart Khalid bin Mohammed Al Attiyah in Qatar on Tuesday where they also signed an agreement to hold regular ministerial-level talks and establish a foundation for bilateral defence cooperation, the ministry said in a press release. Shin embarked on a seven-day trip to the Middle East last week, during which he also travelled to the United Arab Emirates and Saudi Arabia, where he attended the World Defense Show. Shin's trip comes as South Korea seeks to become one of the world's largest arms suppliers.

<https://www.reuters.com/world/southkorea-qatar-defence-ministers-agreeboost-military-ties-seoul-2024-02-07/>

Indonesia scraps plan to buy Mirage fighter jets from Qatar

Reuters, February 11, 2024

Indonesia has ditched a controversial plan to buy 733 million euros (\$790 million) worth of Mirage 2000-5 fighter jets previously used by Qatar, the defence ministry spokesperson said late on Saturday.

"There is no purchase of Mirage jets. Even though it was planned, it has been cancelled ... meaning there is no active contract," spokesperson Dahnil Anzar Simanjuntak said in a statement, but did not elaborate.

Last month, the ministry said the deal to purchase the 12 fighter jets was delayed due to fiscal constraints and that the

military would order a retrofit for its existing Sukhoi and F-16 aircraft instead.

<https://www.reuters.com/business/aerospace-defense/indonesia-scrap-plan-buy-mirage-fighter-jets-qatar-2024-02-11/>

J. Saudi Arabia

Saudi Arabia to manufacture parts of Lockheed missile defense system

Reuters, February 5, 2024

U.S. weapons maker Lockheed Martin (LMT.N) has signed agreements for Saudi Arabian companies to manufacture parts of its missile defense system, as the U.S. continues to conduct military operations in the Middle East against Iran-backed groups. The sub-contracts for the Terminal High Altitude Area Defense (THAAD) system will enhance manufacturing capabilities in Saudi Arabia and transfer expertise to strengthen the country's defence industry, Lockheed said in a statement on Monday. The deal was announced on the sidelines of the World Defense Show in the capital Riyadh. State-owned Saudi Arabian Military Industries (SAMI) signed 11 agreements at the event, according to the country's state news agency.

<https://www.reuters.com/business/aerospace-defense/saudi-companies-make-parts-lockheeds-thaad-defense-system-2024-02-05/>

Munitions India Limited Secures \$225 Million Defense Deal with Saudi Arabia

IDRW, February 7, 2024

Munitions India Limited (MIL), a leading Indian defense manufacturer, has secured a significant contract worth \$225 million to supply artillery ammunition to the Kingdom of Saudi Arabia. This milestone agreement was facilitated by MIL's partner, Nadrah Company.

The signing ceremony was graced by distinguished guests, including His Excellency Ahmad Abdulaziz Al-Ohali, Governor of the General Authority of Military Industries (GAMI) of Saudi Arabia, and the Honorable Raksha Rajya Mantri

(Minister of State for Defence) of India, Shri Ajay Bhatt.

<https://idrw.org/munitions-india-limited-secures-225-million-defense-deal-with-saudi-arabia/>

LIG Nex1 inks \$3.2 bn missile defense deal with Saudi Arabia

Korea Economy Daily, February 7, 2024

South Korea's major defense system developer LIG Nex1 Co. has clinched a \$3.2 billion deal to export its latest missile interceptor to Saudi Arabia, raising expectations for more similar Korean weapon exports to the Middle East given its push to deter growing militia threats. South Korea's and Saudi Arabia's defense ministries on Tuesday revealed that LIG Nex1 signed a \$3.2 billion contract with the Saudi Ministry of Defense in November to deliver its missile interceptor system called Cheongung II in Korean, meaning "heaven's bow," to the Middle Eastern country.

<https://www.kedglobal.com/aerospace/defense/newsView/ked202402070006>

Saudi Arabia Unveils New SAMI 8x8 155mm Howitzer

Israel Defense, February 11, 2024

New Saudi Arabian Howitzer unveiled. The Saudi Arabian Military Industries (SAMI) presented an 8x8 155mm self-propelled howitzer at the World Defense Show 2024 that took place at Riad last week.

While the name of the new self-propelled howitzer remains under wraps, SAMI's representatives have disclosed that the vehicle is currently undergoing rigorous trials with the Saudi Armed Forces. Armyrecognition.com website tells that the Saudi Army and the National Guard, both integral components of the Saudi Armed Forces, currently operate the French manufactured CAESAR, a 155mm 6x6 self-propelled howitzer. The CAESAR models serving the Saudi forces are mounted on two different chassis: a 6x6

Sherpa truck for the army and a Unimog chassis for the National Guard.

<https://www.israeldefense.co.il/en/node/61188>

Saudi Arabia to Purchase Attack Drones from China

Israel Defense, February 12, 2024

The China Export and Import Corporation of Defense has announced that the Chinesemade drone WING LOONG-10B will soon enter service with the Royal Saudi Air Force. The drone was showcased at the WDS Defense Exhibition in Riyadh (February 4-8). A representative from the manufacturing company conveyed to Jane's that this drone and another version of it are already in service with the Chinese military. The Chinese displayed several types of munitions intended for their drones, including air-to-air missiles, laserguided bombs, anti-ship missiles, and small guided bombs. The WL-10 is a HighAltitude Long Endurance (HALE) drone with a single turbo-solenoid engine. The drone is equipped with a highly highfrequency communication antenna and data transmission channel (U-VHF). The engine's air intake is installed on the back of the vehicle.

<https://www.israeldefense.co.il/en/node/61198>

K. Türkiye

Türkiye agrees to provide combat drones, other tech to Egypt

Daily Sabah, February 5, 2024

Foreign Minister Hakan Fidan on Sunday said Türkiye agreed to provide its increasingly popular drones to Egypt, as the two countries add momentum to the rapid restoration of normal diplomatic relations after a decade of strained ties. President Recep Tayyip Erdoğan is set to travel to Egypt on Feb. 14 to meet his counterpart Abdel-Fattah el-Sissi, in his first visit since Ankara and Cairo upgraded relations by appointing ambassadors last year.

<https://www.dailysabah.com/business/defense/turkiye-agrees-to-provide-combat-drones-other-tech-to-egypt>

Turkish drone magnate Baykar begins to build plant in Ukraine

Daily Sabah, February 7, 2024

Turkish defense firm Baykar has commenced building a factory near Kyiv that would employ around 500 people, where it is expected to manufacture either its famed Bayraktar TB2 drone model or its new TB3 drone, the company's chief executive said on Tuesday. Turkish-made Bayraktar drones have gained prominence globally after helping to swing conflicts in multiple countries including Ukraine, where they played a pivotal role in countering Russian forces early into Moscow's invasion.

<https://www.dailysabah.com/business/defense/turkish-drone-magnate-baykar-begins-to-build-plant-in-ukraine>

F-16 sale to Türkiye considered final as Congress review ends

Daily Sabah, February 11, 2024

The sale of F-16 fighter jets to Türkiye is considered final as the review and objection process in the U.S. Congress ended on Saturday. U.S. President Joe Biden's administration on Jan. 26 formally notified Congress of its intention to proceed with the sale of 40 Lockheed Martin F-16s and nearly 80 modernization kits to Türkiye. The move in a prolonged process that tested Washington's ties with Ankara came after Türkiye fully completed ratification of the NATO membership of Sweden.

<https://www.dailysabah.com/business/defense/f-16-sale-to-turkiye-considered-final-as-congress-review-ends>

Türkiye, Greece intend to join European Sky Shield Initiative

Daily Sabah, February 15, 2024

Defense Minister Ya'ar Güler and Greek Defense Minister Nikos Dendias signed a letter of intent to take part in the European Sky Shield Initiative.

The document was signed at a ceremony

hosted by German Defense Minister Boris Pistorius in Brussels. At the ceremony, Güler said: "This initiative, led by Germany, is an important step toward fulfilling NATO's requirements while ensuring the interoperability and integration of allies. As Türkiye, we are ready to contribute to this initiative with our wide range of national capabilities."

<https://www.dailysabah.com/politics/diplomacy/turkiye-greece-intend-to-join-european-sky-shield-initiative>

L. Africa

SA can be top nuclear technology exporter

Biz Community, February 8, 2024

Dr Kelvin Kemm, chairman of Stratek Global, announced that South Africa has the potential to become an exporter of nuclear reactors. The country was an early pioneer in developing a commercial small modular reactor (SMR), and it is now a world leader in SMR development, ready to construct the prototype immediately. This initiative is entirely privately funded.

The South African reactor, the HTMR-100, has been designed specifically for deployment in remote areas. It does not require a large body of water for cooling, as it uses helium gas, a design decision made with the versatility needs of African countries in mind.

These reactors are affordable and can be owned by governments, provinces, municipalities, and private companies, including mining companies.

<https://www.bizcommunity.com/article/sa-can-be-top-nuclear-technology-exporter-901174a>

IAEA Empowers African Teachers with Educational Science Kits to Enhance Learning

IAEA, February 9, 2024

Twelve schools across Africa have received educational science kits from the IAEA as part of an initiative to promote scientific exploration and inspire students.

The initiative aims to cultivate interest in nuclear science and technology among students and to provide a pathway for fostering innovation across the African continent, by encouraging students to pursue nuclear-related careers. This will eventually ensure a pipeline of qualified professionals and enable African countries to fully leverage the benefits of nuclear science.

Schools in Egypt, Ghana, Kenya and South Africa have already received the kits as a resource for teaching science and nuclear-related subjects in secondary schools. The aim is to spark children's interest in nuclear science in the region by enabling them to conduct innovative physics experiments in the classroom.

<https://www.iaea.org/newscenter/news/iaea-empowers-african-teachers-with-educational-science-kits-to-enhance-learning#:~:text=IAEA%20Empowers%20African%20Teachers%20with%20Educational%20Science%20Kits%20to%20Enhance%20Learning,%C3%97&text=Twelve%20schools%20across%20Africa%20have,scientific%20exploration%20and%20inspire%20students.>

M. South East Asia

The Philippines: Advanced Tech for Disaster Resilience

Open Gov, February 1, 2024

The Department of Science and Technology (DOST) recently convened a high-profile forum and a three-day exhibit, the 2024 Handa Pilipinas, at the Philippine Congress, marking a significant initiative within its disaster risk reduction campaign. The 2024 Handa Pilipinas event showcased DOST agencies' advanced technologies for disaster prevention, emphasising the critical need for investing in cutting-edge solutions to combat natural hazards and raising awareness among stakeholders, including legislators, about the importance of preparedness.

The event garnered support from Philippine legislators and legislative staff who recognised the need for a comprehensive approach to the application of technologies and

innovations. Representative Carlito M. Marquez, the 1st District of Bohol, emphasised the vulnerability of the Philippines to geological and hydrometeorological occurrences.

<https://opengovasia.com/the-philippines-advanced-tech-for-disaster-resilience/>

Nuclear regulatory overhaul signals gov't gearing up to hit 2,400-MW target by 2032

Business World, February 6, 2024

THE creation of a nuclear energy program coordinating committee (NEP-CC) will ramp up preparations to hit an ambitious 2,400-megawatt (MW) target by 2032, analysts said.

"Hopefully this will hasten the clearing and approval of nuclear power construction and commissioning in the Philippines," Bienvenido S. Oplas, Jr., president of the free market think tank Minimal Government Thinkers, said in a Viber message.

In an order dated Jan. 29, the Department of Energy (DoE) created NEP-CC to ensure its "effective participation" in the NEP-Inter-Agency Committee (NEP-IAC).

The DoE has revised its energy roadmap to incorporate in the 2023 to 2050 Philippine Energy Plan a clean energy scenario which envisions "a more diverse energy mix that includes nuclear energy."

<https://www.bworldonline.com/economy/2024/02/06/574051/nuclear-regulatory-overhaul-signals-govt-gearing-up-to-hit-2400-mw-target-by-2032/>

Singapore builds AI model to 'represent' Southeast Asians

The Hindu, February 8, 2024

Singapore government-backed project builds large language model trained on Southeast Asian data.

A Singapore government-led initiative aims to correct the imbalance with a Southeast Asian LLM, the first in a family of models named SEA-LION - Southeast Asian Languages in One Network - trained in the

region's languages and cultural norms. Trained on data in 11 Southeast Asian languages including Vietnamese, Thai and Bahasa Indonesia, the open-sourced model is a cheaper and more efficient option for the region's businesses, governments and academia, said Leslie Teo at AI Singapore.

<https://www.thehindu.com/sci-tech/technology/singapore-builds-ai-model-to-represent-south-east-asians/article67824035.ece#:~:text=More%20than%209%25%20of%20its,the%20National%20University%20of%20Singapore.>

N. East Asia

North Korea tests more cruise missiles as Kim Jong Un calls for war readiness

The Hindu, February 2, 2024

South Korea's military said it detected North Korea firing multiple cruise missiles into waters off its western coast on February 2, adding to a provocative run of weapons testing in the face of deepening tensions with the United States, South Korea and Japan.

The launches came hours after state media reported that North Korean leader Kim Jong Un reiterated his focus on strengthening his naval forces as he inspected the construction of new warships at a western shipyard, calling such projects crucial to the country's war preparations.

<https://www.thehindu.com/news/international/north-korea-tests-more-cruise-missiles-as-kim-jong-un-calls-for-war-readiness/article67803402.ece>

Japan demonstrates floating seismic isolation system for SMRs

World Nuclear News, February 12, 2024

A team led by the Japan Atomic Energy Agency has concluded a series of large-scale demonstration tests for an innovative new floating seismic isolation system intended for pairing with small modular reactors to enable siting feasibility, including in areas of high seismicity.

The series of tests - which ran from 29 January to 9 February - used a 1/15-scale mockup of the structure of a small modular reactor (SMR) plant design (measuring 9 metres in length, 3 metres wide and 5 metres high) floating in a water tank mounted on the world's largest shaking table, operated by the National Research Institute for Earth Science and Disaster Resilience (NIED) in Miki City, Hyogo Prefecture, Japan.

NIED and IHI Corporation, a major nuclear equipment vendor, cooperated with Japan Atomic Energy Agency (JAEA) in the testing. The seismic waves input to the shaking table are based on some of the largest earthquakes observed, including the March 2011 Great East Japan Earthquake. Multiple accelerometers installed on the floating body and in the surrounding water pool measure the characteristic response of the floating seismic isolation structure and demonstrate its seismic isolation performance.

<https://www.world-nuclear-news.org/Articles/Japan-demonstrates-floating-seismic-isolation-syst>

Taiwan detects 14 mainland Chinese jets and drones carrying out 'combat readiness patrols' around island

South China Morning Post, February 14, 2024

Taiwan's defence ministry said it detected 14 mainland Chinese air force planes operating around the island and carrying out "joint combat readiness patrols" with PLA warships. Beijing has over the past four years regularly sent warplanes and warships into the skies and waters around the island as it seeks to assert sovereignty claims that the Taipei government rejects. Taiwan's defence ministry said that starting on February 14, it had detected 14 People's Liberation Army aircraft, including J-16 fighters and drones, operating off northern and southwestern Taiwan. Nine of those aircraft crossed the Taiwan Strait's median line, or areas close by, working with PLA

warships to carry out "joint combat readiness patrols", the ministry added.

<https://www.scmp.com/news/china/diplomacy/article/3251959/taiwan-detects-14-mainland-chinese-jets-and-drones-carrying-out-combat-readiness-patrols-around>

North Korea fires several cruise missiles in fifth barrage of 2024

The Japan Times, February 14, 2024

North Korea launched several cruise missiles into the sea from the country's eastern coast on Wednesday morning, the South's military said, as the nuclear-armed country continues to flex its military muscle.

In a statement, the South Korean Joint Chiefs of Staff said that an undetermined number of cruise missiles had been spotted flying over waters off the northeastern city of Wonsan around 9 a.m. The launches were Pyongyang's fifth known barrage of cruise missiles since mid-January and part of a spate of weapons tests by the North since the start of the year. These have included new strategic cruise missiles and submarine-launched weapons designed to carry small nuclear bombs.

<https://www.japantimes.co.jp/news/2024/02/14/asia-pacific/politics/north-korea-cruise-missiles-fifth-time/#:~:text=North%20Korea%20launched%20several%20cruise,to%20flex%20its%20military%20muscle>

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