

Nuclear, Missile & Space Digest

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A Fortnightly Newsletter from the MP-IDSA

May 15, 2024

A. India

- India test-fires Agni-V ballistic missile with multiple warhead technology under Mission Divyastra
- India's defence sector has opportunities for USD 138 bn over next 10 years

B. Pakistan

- Pakistan test-fires a new rocket system developed by its military, the army says

C. China

- China's 3rd aircraft carrier Fujian completes 8-day maiden sea trial
- China tests advanced missile similar to one likely used by Israel on Iran
- Russia starts developing nuclear power unit for joint lunar station with China, RIA says

D. Russia

- Zelenodolsk shipyard to float missile, patrol ships on May 7
- Russian tech firm ramps up production of glide bombs – CEO
- Russia engages TOS-2 flamethrowers in Ukraine
- Indonesian ambassador says Su-35 fighter jets contract remains in force
- Aerospace Forces receive new Su-35S fighters

E. Europe

- Finland Purchases Patria Armored Vehicles
- German Air Force Declares Heron TP UAV Ready for Missions
- Finland partners with Virginia National Guard
- Airbus finalises acquisition of Aerovel and its flagship UAS product
- Hungary and China sign nuclear energy cooperation agreement
- Romania receives US approval for AIM-9X Sidewinder sale
- Reaper drones deployed in France for air security of Olympic Flame

F. The United States of America

- US microreactor developer goes public
- US Prez Biden signs ban on imports of Russian nuclear reactor fuel into law

West Asia

G. Iran

- Yemeni army targets 3 Israeli-linked warships, vessels in support of Palestine
- Israel's military positions hit in fresh retaliatory attacks by resistance groups
- Hezbollah uses new heavy missile against Israeli military targets

H. Israel

- Hermes 900 UAVs Assists Brazilian Rescue Forces
- Amid Rafah Operation Concerns, US Pauses Bomb Shipment to Israel
- Lufthansa Interested in Purchasing Elbit's Hermes Drones
- Epsilor Unveils New NATO 6T Battery at EUROSATORY 2024
- Elbit Secures to Provide Crossbow Mortars to Austrian Army: Assessment

I. Saudi Arabia

- Saudi Arabia Interested in Purchasing the F-15EX

J. The United Arab Emirates

- UAE enhances defence arsenal with HARM missile upgrade

K. East Asia

- South Korea considers joining alliance for sharing military technology with Australia, US and UK
- Partnership for ARC-100 commercialisation

L. Southeast Asia

- Brunei continues Air Force modernisation with H145M helicopters
- India-Indonesia strengthen defence partnership under Act East Policy
- Indonesia proposes cutting payments for S.Korea fighter jet project, Yonhap reports
- Lockheed and Boeing seal deal with Malaysia for targeting pods

A. India

India test-fires Agni-V ballistic missile with multiple warhead technology under Mission Divyastra

The Hindu, May 11, 2024

In a major technological breakthrough and building in redundancy into the country's nuclear weapons programme, Prime Minister Narendra Modi on Monday announced the successful test firing of Agni-V ballistic missile with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology by the Defence Research and Development Organisation (DRDO) under Mission Divyastra. The MIRV technology means a single missile can carry multiple warheads. The flight test named Mission Divyastra was carried out from Dr A. P. J. Abdul Kalam Island in Odisha, DRDO said in a statement adding, "Various telemetry and radar stations tracked and monitored multiple re-entry vehicles. The mission accomplished the designed parameters."

India test-fires Agni-V ballistic missile with multiple warhead technology under Mission Divyastra - The Hindu

India's defence sector has opportunities for USD 138 bn over next 10 years

The Economic Times, May 11, 2024

India's defence sector holds a lucrative ordering opportunity of USD 138 billion over FY24-32 amid the escalating demand for defence equipment, technologies, and services, offering significant prospects for companies engaged in defence production and technology development, according to a report titled 'India Defence' by Nomura. The report highlights that India's defence capital expenditure is poised to surge to 37 per cent of the total budget by FY30, marking a substantial increase from the projected 29 percent in FY25. This equates to a cumulative capital outlay of Rs 15.5 trillion over FY24-30, indicating substantial growth compared to previous periods.

India defence shares: India's defence sector has opportunities for USD 138 bn over next 10 years - The Economic Times (indiatimes.com)

B. Pakistan

Pakistan test-fires a new rocket system developed by its military, the army says

AP, May 15, 2024

Pakistan's military said it successfully test-fired Wednesday a short-range, indigenously developed rocket system meant to boost its ability to deter any offensive action from archenemy and neighbor India.

According to a military statement, the Fatah-II Guided Rocket System has a range of 400 kilometers (240 miles), as well as a state-of-the-art navigation system, unique trajectory, and maneuverable features.

It can engage targets with high precision and defeat any missile defense system, it said and added that Pakistan's Prime Minister Shehbaz Sharif and the military congratulated the scientists and engineers behind the rocket system, as well as troops who ensured a successful launch.

Pakistan's military often test-fires home-developed cruise missiles and weapons in an effort to showcase its ability to counter any threat from India.

The two South Asian nuclear-armed rivals have fought three wars against each other since they gained independence from British colonial rule in 1947.

Pakistan test-fires a new rocket system developed by its military, the army says | AP News

C. China

China's 3rd aircraft carrier Fujian completes 8-day maiden sea trial

The Hindu, May 9, 2024

China's third aircraft carrier, *Fujian*, has successfully completed its 8-day maiden sea trials. *Fujian* is an 80,000-tonne supercarrier with electromagnetic catapults for launching aircraft, making China the second country after the U.S. to field a supercarrier with this technology. In the next stage, PLAN *Fujian* will conduct follow-up tests according to

established plans,” according to *China Military Online*, the English language news website of the Chinese People’s Liberation Army (PLA). The aircraft carrier set sail for trials from Jiangnan Shipyard in Shanghai on May 01.

The developments will be watched very closely by India and other countries in the region which are also planning to build aircraft carriers as Beijing rapidly expands its maritime power and presence.

China’s 3rd aircraft carrier Fujian completes 8-day maiden sea trial - The Hindu

China tests advanced missile similar to one likely used by Israel on Iran

Business Standard, May 2, 2024

The footage of the ALBM being released from the bomber was part of an official PLA video, which was demonstrating the capabilities of the H-6K, a modernised version of the H-6 bomber, which in turn is a Chinese derivative of the Soviet-era Tu-16 Badger heavy bomber. In the video, the missile can be seen being released from a pylon under the bomber’s wing.

While the H-6 has a range of almost 6,000 kilometres (km), the H-6K’s more efficient engines mean it could fly significantly further.

Details about the new Chinese ALBM are scarce, but *The War Zone* reports that it is similar to or belongs to the family of a missile that was displayed at the 2022 Airshow China in Zhuhai.

The designation ‘2PZD-21’ is printed on the side of the ALBM.

China has at least two other types of ALBMs, which are widely regarded to be anti-ship or ‘carrier killer’ weapons meant to target the adversary’s aircraft carriers.

China tests advanced missile similar to one likely used by Israel on Iran | External Affairs Defence Security News - Business Standard (business-standard.com)

Russia starts developing nuclear power unit for joint lunar station with China, RIA says

Tribune, May 8, 2024

Russia has started developing a nuclear power plant for its planned joint lunar station with China, the RIA news agency cited Yuri Borisov, the head of Russia’s space agency Roscosmos, as saying on Wednesday. In March, Borisov said Moscow was considering the idea of powering the station using nuclear energy. Something he said could one day allow lunar settlements to be built.

Borisov, a former deputy defence minister, said that Russia and China had been jointly working on a lunar programme and that Moscow was able to contribute with its expertise on “nuclear space energy”.

Borisov spoke at the time also of Russian plans to build a nuclear-powered cargo spaceship. He said all the technical questions concerning the project had been solved apart from finding a solution on how to cool the nuclear reactor.

Russia starts developing nuclear power unit for joint lunar station with China, RIA says (tribune.com.pk)

D. Russia

Zelenodolsk shipyard to float missile, patrol ships on May 7

TASS, May 2, 2024

The Zelenodolsk Shipyard will float the Typhoon small missile ship of project 22800 and the Viktor Veliky patrol ship of project 22160 on May 7, a source close to the Navy Main Headquarters told TASS.

“The two latest warships will be floated on May 7 on the eve of the Victory Day,” he said.

TASS has no official confirmation of the report.

The Defense Ministry earlier said the two warships would be floated in May, but gave no date.

Project 22800 ships with Kalibr missiles are brown-water multirole missile-artillery boats designed to destroy surface warships and boats and repel air attacks. They have a displacement of 800-900 tons, a speed of 30 knots, cruising capacity of 12 days, a range of 2500 miles and a crew of 39 men. The ships are armed with precision missiles (one 8-container universal vertical launcher) and artillery guns.

Project 22160 ships are designed to guard and protect maritime economic zone. The cruising capacity is 60 days, the speed is 30 knots and the displacement is close to 1300 tons. The crew comprises nearly 80 men. The navigation range is 6000 nautical miles. The warships are armed with 57mm artillery gun, an anti-aircraft missile complex and machineguns. They can carry a Ka-27PS helicopter

<https://tass.com/defense/1782727>

Russian tech firm ramps up production of glide bombs – CEO

TASS, May 3, 2024

Russia's state tech corporation Rostec is ramping up the production of glide bombs that are highly needed, Rostec CEO Sergey Chemezov said on Friday.

"Our specialists jointly with Tactical Missiles Group continue work to adapt conventional air munitions to the gliding and guidance module: these are glide bombs that are highly needed," the chief executive said.

Rostec is "building up the production of air bombs of all calibers and types," Chemezov said.

<https://tass.com/defense/1783153>

Russia engages TOS-2 flamethrowers in Ukraine

TASS, May 3, 2024

The Russian forces actively engage TOS-2 Tosochka heavy flamethrowers in the Ukrainian operation, Rostec CEO Sergey Chemezov said at a meeting with Prime Minister Mikhail Mishustin.

"The production of new weapons has been mastered, including TOS-2 heavy flamethrowers. They are intensively engaged in the zone of the special military operation," he said.

220mm TOS-2 is a successor to TOS-1A with improved characteristics. It is carried by all-terrain Ural wheeled truck and has a longer range of unguided projectiles. The aiming and fire are automatically controlled. The vehicle has a manipulator crane and does not need a transloader. TOS-2 has electronic protection against precision weapons.

<https://tass.com/defense/1783193>

Indonesian ambassador says Su-35 fighter jets contract remains in force

TASS, May 8, 2024

Indonesia has never terminated a contract to purchase Su-35 fighter jets from Russia and is waiting for the situation to become "more accommodating" to return to its implementation, Indonesian Ambassador to Russia Jose Tavares told TASS.

"Indeed, at some point Russia and Indonesia signed this treaty. Indonesia has never terminated it, but it was put on hold to avoid certain potential inconveniences," he said.

The ambassador added that Indonesia will return to this question when the situation becomes "more accommodating."

In his estimates, around 30% of weapons in service with his country's armed forces are Russian-made.

<https://tass.com/defense/1785383>

Aerospace Forces receive new Su-35S fighters

TASS, May 8, 2024

The Russian Aerospace Forces received a batch of new Su-35S multirole fighters of generation 4++. They were produced by the Gagarin Aircraft Plant in Komsomolsk-

on-Amur, the United Aircraft Corporation (UAC) said.

“The plant in Komsomolsk-on-Amur has reached a rhythmical production pace this year. It is the second batch of combat aircraft delivered to the Aerospace Forces. The plant fulfils the commitments in the deliveries of new aircraft and works to create new batches of serial Su-35 and Su-57 jets,” UAC CEO Yuri Slyusar said.

Su-35S have passed ground and flight trials and flew from Komsomolsk-on-Amur to the deployment airfield.

Su-35S (Flanker-E+ by NATO classification) is a deeply upgraded super maneuverable multirole fighter jet of generation 4++ designed with fifth-generation technologies. It is distinguished by a new digital avionic complex, a new radar with passive phased antenna array and increased number of simultaneously tracked and attacked targets, plasma-ignition engines of increased capacity and controllable vectoring. The engines correspond to fifth-generation power plants as they develop supersonic speed without a boost. Su-35S is a deep upgrade of Su-27. It has a reinforced glider and no frontal horizontal fins and brake flap. Braking at landing is done by turning rudders to different sides.

<https://tass.com/defense/1785563>

E. Europe

Finland Purchases Patria Armored Vehicles

Israeli Defense, May 2, 2024

Finnish-Norwegian company Patria announced that the Finnish Army will purchase heavy Patria 6x6 armored vehicles as part of the Common Armored Vehicle System (CAVS) program. Finnish Minister of Defense Antti Häkkinen has authorized the Finnish Defense Forces Logistics Command to initiate a serial procurement of these vehicles from Patria.

The initial phase of the acquisition will involve obtaining one pre-series vehicle and 20 Kongsberg remote weapon stations,

which will be integrated into the vehicles. The acquisition also includes an option for purchasing an additional 18 vehicles, as well as provisions for vehicle outfitting, maintenance, spare parts, and training.

<https://www.israeldefense.co.il/en/node/61894>

German Air Force Declares Heron TP UAV Ready for Missions

Israeli Defense, May 5, 2024

The German Luftwaffe has announced that its Israeli-made HERON-TP UAVs, manufactured by the Israel Aerospace Industries, are ready and authorized for operational use within Germany's borders, and flights will commence in mid-May.

Jane's reports that the Air Force announcement confirms that the airworthiness certificate was issued by the Federal Aviation Office in Kiel on May 2nd, and that the operational approval for the UAVs is valid globally. Flights will begin in May at the Luftwaffe base in Jagel in northern Germany.

At the end of 2022, the Israeli-made UAVs received approval from the German Military Aviation Authority, and since then have been operated by German teams from a base in Israel.

The Heron TP UAV is intended in Germany to fill an interim role between the operation of the previous Heron-1 system and the future European medium-range UAV Airbus' Eurodrone.

<https://www.israeldefense.co.il/en/node/61911>

Finland partners with Virginia National Guard

Airforce Technology, May 7, 2024

On 2 May 2024, the Finnish Minister of Defence, Antti Häkkinen, and the Governor of Virginia, Glenn Youngkin, signed a Letter of Intent in Helsinki, formally marking Finland's entry into the United States National Guard State Partnership Program (SPP).

Through this partnership, the Finnish Defence Forces will gain access to enhanced training opportunities, joint exercises, and deeper sectoral cooperation, especially within the domains of the Army, Air Force, and cyber security.

Finland entered into Nato on 7 March 2024, after reconsidering its national security policy in response to Russia's full-scale invasion of Ukraine.

US Air National Guard units are a significant element in Nato's Air Policing mission, and ongoing mission intercepting Russian aircraft outstepping Russian airspace without flight clearance, and, in some cases, without activating transponders to properly identify and locate the aircraft. Nato intercepted Russian military aircraft more than 300 times in 2023.

<https://www.airforce-technology.com/news/finland-partners-with-virginia-national-guard/>

Airbus finalises acquisition of Aerovel and its flagship UAS product

Airforce Technology, May 8, 2024

This acquisition will grow the European defence prime's portfolio of autonomous rotorcraft systems to include the Flexrotor tactical UAS.

After several months in the making, Airbus finalised its strategic acquisition of uncrewed aerial systems (UAS) manufacturer Aerovel and its flagship product, the Flexrotor. Neither party has released the value of the agreement.

With just over 30 workers, Aerovel will continue to develop systems at its facility in Bingen, Washington as part of a wider, more mature UAS ecosystem.

This acquisition agreement was signed in January 2024. Since then, the agreement was subject to regulatory approvals and customary conditions.

<https://www.airforce-technology.com/news/airbus-finalises-acquisition-of-aerovel-and-its-flagship-uas-product/>

Hungary and China sign nuclear energy cooperation agreement

World Nuclear News, May 10, 2024

A memorandum of understanding on the peaceful uses of nuclear energy has been signed by the China Atomic Energy Authority and Hungary's Ministry of Foreign Affairs.

The agreement was one of 18 covering a wide variety of areas signed during President Xi Jinping's visit to Hungary on Thursday.

A joint statement issued by the two countries on the establishing of an overarching *All-Weather Comprehensive Strategic Partnership for the New Era*, said: "The Chinese side will continue to encourage capable Chinese enterprises to invest in Hungary. The two sides will promote orderly cooperation in emerging fields including clean energy, artificial intelligence, mobile communication technology and nuclear energy and technology."

Hungary's President Viktor Orban said, after his talks with the Chinese president: "The Hungarians have serious ambitions. The previous 100 years, the 20th Century, was a shameful one for Hungary. It was a century in which we lost, a century in which we suffered extremely heavy losses of historic proportions. And the concept driving the Hungarians is that we want to win the 21st Century, and not lose it. And to win we need partners, investors, trading partners and the world's most advanced technology."

<https://www.world-nuclear-news.org/Articles/Hungary-and-China-sign-nuclear-cooperation-agreement>

Romania receives US approval for AIM-9X Sidewinder sale

Airforce Technology, May 10, 2024

To fortify its defence infrastructure, Romania secured approval from the United States for the acquisition of AIM-9X Sidewinder Block II missiles, signalling

a deepening alliance between the two nations.

The decision to equip the Romanian Air Force's F-16 fleet with these air-to-air missiles comes amidst growing concerns over security threats in the region. With Block II technology at its disposal, Romania stands poised to enhance its operational readiness and deter potential aggressors.

US Chargé d'Affaires Michael Dickerson hailed the approval as a testament to the enduring partnership between Romania and the United States, emphasising that the sale transcends mere transactional significance. "This acquisition is not just a transaction; it is a testament to our shared commitment to security and peace," remarked Dickerson. "These advanced missiles will ensure the safety of the Romanian sky, further solidifying our collective defence posture."

<https://www.airforce-technology.com/news/romania-receives-us-approval-for-aim-9x-sidewinder-sale/>

Reaper drones deployed in France for air security of Olympic Flame

Airforce Technology, May 13, 2024

On 8 May 2024, French Air and Space Force deployed two Medium Altitude Long Endurance (MALE) Reaper Drones to protect French national territory as part of special air security arrangements over the 1945 victory commemorations in Paris and the arrival of the Olympic flame in Marseille.

Reaper drone operations are often kept away from public view to protect the security of the systems.

Observers will be interested to see the announcement from France's Ministry of Defence detailing the use of the drones from the 33rd Reconnaissance, Surveillance, and Attack Wing (ESRA) being operated from Cognac air base, after taking off from two separate air bases earlier in the day.

The two drones were operated by a crew of four Airmen based in Cognac, while their

operational control was directed by air defence and air operations command located at Air Base 942 in Lyon-Mont Verdun.

<https://www.airforce-technology.com/news/reaper-drones-deployed-in-france-for-air-security-of-olympic-flame/>

F. The United States of America

US microreactor developer goes public

World Nuclear News, May 8, 2024

NANO Nuclear Energy Inc said it intends to use the net proceeds from its initial public offering (IPO) to continue R&D of its proprietary ZEUS and ODIN microreactor designs as well as its high-assay low-enriched uranium (HALEU) activities.

The company announced that its IPO of 2,562,500 shares of its common stock was being priced to the public at USD4.00 per share, less underwriting discounts and commissions. The stock began trading on the Nasdaq Capital Market on Wednesday, and it expects gross proceeds of about USD10.25 billion from the IPO, which is expected to close on 10 May.

"NANO Nuclear intends to use the net proceeds from this offering to continue the research and development of its proprietary micro nuclear reactor designs, ZEUS and ODIN, advancing its exclusive licensed technology to transport commercial quantities of high-assay, low-enriched uranium (HALEU) fuel needed for the future of the advanced nuclear industry, development of a US domestic source of HALEU fuel fabrication for NANO Nuclear's own microreactors and the broader advanced nuclear reactor industry as well as general corporate purposes and working capital," the company said.

<https://www.world-nuclear-news.org/Articles/US-microreactor-developer-goes-public>

US Prez Biden signs ban on imports of Russian nuclear reactor fuel into law

Business Standard, May 14, 2024

President Joe Biden signed into law a ban on Russian enriched uranium on Monday, the White House said, in the latest effort by Washington to disrupt President Vladimir Putin's invasion of Ukraine.

The ban on imports of the fuel for nuclear power plants begins in about 90 days, although it allows the Department of Energy to issue waivers in case of supply concerns.

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The law also unlocks about \$2.7 billion in funding in previous legislation to build out the US uranium fuel industry.

https://www.business-standard.com/world-news/us-prez-biden-signs-ban-on-imports-of-russian-nuclear-reactor-fuel-into-law-124051400245_1.html

West Asia

G. Iran

Yemeni army targets 3 Israeli-linked warships, vessels in support of Palestine

IRNA, May 9, 2024

Israeli ships MSC DEGO and MSC GINA were targeted in the Arabian Sea in an operation carried out with several ballistic missiles and drones, which hit the targets accurately, Yemeni Armed Forces Spokesman Brigadier General Yahya Saree said in a statement carried by Al Mayadeen on Thursday.

Saree said that the Yemeni Armed Forces carried out a special operation against the

MSC VITTORIA ship related to the Zionist regime in the Indian Ocean.

Yemeni Armed Forces have said that they won't stop their attacks until the unrelenting Israeli ground and aerial offensives in Gaza are halted.

Yemenis have declared their open support for Palestine's struggle against the Israeli occupation since the regime launched a devastating war on Gaza on October 7 after the territory's Palestinian Resistance movements carried out a surprise retaliatory attack, dubbed Operation Al-Aqsa Storm, against the occupying entity.

<https://en.irna.ir/news/85471075/Yemeni-army-targets-3-Israeli-linked-warships-vessels-in-support>

Israel's military positions hit in fresh retaliatory attacks by resistance groups

IRNA, May 11, 2024

Lebanon's Hezbollah resistance movement said in a statement on Saturday that it had fired suicide drones at Beit Hillel military base and the newly-built platforms of the Iron Dome, forcing it to stop functioning.

According to Lebanese media outlets, Israeli fighter jets failed to intercept Hezbollah's drones after they entered the airspace over Israeli-occupied territories.

Israeli media meanwhile said that power has been cut off in the city of Kiryat Shmona following a Hezbollah missile attack there.

Also on Saturday, the Iraqi Islamic Resistance, which is an umbrella group of several resistance movements, announced new attacks on positions in Israeli-occupied territories.

The Islamic Resistance said that it targeted Ramon airbase using advanced cruise missiles.

Resistance groups in the region have conducted attacks on Israeli positions ever since the regime launched its war on Gaza in early October.

The groups have promised to continue their operations until the genocide against Palestinians comes to an end.

<https://en.irna.ir/news/85473749/Israel-s-military-positions-hit-in-fresh-retaliatory-attacks>

Hezbollah uses new heavy missile against Israeli military targets

IRNA, May 12, 2024

Hezbollah said on Sunday that it has used Jihad Mughniyeh heavy missiles in attacks against an Israeli military base in occupied Shebaa Farms.

The unguided tactical missile has a high-level destructive power and is equipped with a warhead weighing 120kg.

Hezbollah has been conducting daily attacks against Israel's military positions on Lebanon's southern border in an effort to reduce pressure on Palestinian resistance fighters battling the regime's forces inside **Gaza**.

The Lebanese movement on Sunday announced fresh operations against Israeli targets, saying that one of the attacks hit an armoured vehicle carrying spying equipment at Ramon base.

Hezbollah has promised to continue its anti-Israel operations until the regime stops its genocidal war in Gaza.

<https://en.irna.ir/news/85474911/Hezbollah-uses-new-heavy-missile-against-Israeli-military-targets>

H. Israel

Hermes 900 UAVs Assists Brazilian Rescue Forces

Israeli Defense, May 8, 2024

The Brazilian Air Force has been employing Hermes 900 (RQ-900) UAVs, manufactured by Israel's Elbit System, to aid flood victims in Rio Grande do Sul.

Defense.com website reports that the UAVs, operated by the Horus Squadron based at Santa María Air Base (BASM), have been

conducting flights over the region that includes the city of Restinga Sêca.

The objective is that individuals who are isolated, at risk, or require rescue, will vacate their shelter upon seeing or hearing the aircraft, or leave some kind of marking to facilitate their identification, thus enabling the drone operators to provide effective support.

Upon sight or sound of the aircraft, vacate their shelters, and leave markings on surfaces to facilitate their identification, thus enabling effective support to be provided.

<https://www.israeldefense.co.il/en/node/61950>

Amid Rafah Operation Concerns, US Pauses Bomb Shipment to Israel

Israeli Defense, May 9, 2024

The Biden administration paused a weapons shipment to Israel last week amid American concerns over Israel's military operation in Rafah.

Speaking on condition of anonymity, a "senior administration official" told journalist Barak Ravid from Walla! that "We began to carefully review proposed transfers of particular weapons to Israel that might be used in Rafah beginning in April. As a result of that review, we have paused one shipment of weapons last week. It consists of 1,800 2,000-lb bombs and 1,700 500-lb bombs." Ravid first broke the story on Sunday.

Yesterday (Tuesday), the Wall Street Journal wrote that the US held up a sale of up to 6,500 Joint Direct Attack Munitions (JDAM).

"We are especially focused on the end-use of the 2,000-lb bombs and the impact they could have in dense urban settings as we have seen in other parts of Gaza. We have not made a final determination on how to proceed with this shipment," the official said.

<https://www.israeldefense.co.il/en/node/61955>

Lufthansa Interested in Purchasing Elbit's Hermes Drones

Israeli Defense, May 9, 2024

A spokesperson for the German flagship carrier Lufthansa announced this week that the company will collaborate with Israel's Elbit Systems on military drones through its maintenance subsidiary, Lufthansa Technik.

The website stated that the companies signed a memorandum of understanding in January of this year, but a formal contract has yet to be signed. The project involves an offer to deliver and maintain up to eight Israeli Hermes 900 Starliner drones for the German Navy.

Lufthansa Technik will be responsible for maintenance and staff training, while Elbit will oversee the production of the drones. The project's value was not disclosed by either side.

This marks the first military drone project for the subsidiary of the German flagship carrier. Its defense business includes servicing and maintaining NATO's staple aircraft, such as the F-35 fighter jets, the Chinook transport helicopters, and the Poseidon reconnaissance planes.

<https://www.israeldefense.co.il/en/node/61965>

Epsilor Unveils New NATO 6T Battery at EUROSATORY 2024

Israeli Defense, May 12, 2024

Epsilor, an Israeli developer and manufacturer of smart Li-Ion batteries and chargers, has completed the development of its new generation NATO 6T Li-Ion battery for defense vehicles. The company will present the new battery, named ELI-52526-GM, at the Eurosatory 2024 tradeshow, which will take place in Paris in mid-June.

Over the past year, Epsilor's Li-Ion 6T batteries have been delivered to the US Army Ground Vehicle Systems Center (GVSC) for a series of safety, performance, and aging tests aimed at receiving official certification from the ARMY. The rigorous test campaign includes bullet penetration, heat up to 500 degrees Celsius, performance

in extremely cold and hot temperatures, long cycle life, communication with clients' platforms, and more.

According to Epsilor, the new battery is an international version based on a product designated by the US Army. Designed for defense vehicles and tactical energy storage applications, it will provide military users with four times more energy than traditional Lead-Acid batteries of the same size and approximately 50% more energy than any other 6T Li-Ion battery offered on the market.

The new Li-Ion 6T batteries enable defense platforms to perform long silent-watch missions in extreme climates, store energy generated by diesel generators and renewable sources, and power ground military robotics, which have become common in militaries worldwide.

<https://www.israeldefense.co.il/en/node/61986>

Elbit Secures to Provide Crossbow Mortars to Austrian Army: Assessment

Israeli Defense, May 13, 2024

The Spanish-language website Defensa.com estimates that the 120 mm unmanned Crossbow mortars manufactured by Israeli company Elbit Systems, which the company reported a few days ago it will supply to an unknown European customer, are intended for the Austrian army.

The basis for this assessment is the report from last February that General Dynamics European Land Systems - Steyr will provide the Austrian armed forces with an additional 225 Pandur 6x6 EVO wheeled armored vehicles worth €1.8 billion.

Considering that some of these armored vehicles carry 120 mm mortars and that Elbit's contract is with General Dynamics European Land Systems, the website believes that the Austrians will equip these vehicles with Elbit's Crossbow mortars.

<https://www.israeldefense.co.il/en/node/61990>

I. Saudi Arabia

Saudi Arabia Interested in Purchasing the F-15EX

Israeli Defense, May 5, 2024

The Boeing Company has confirmed that in order to expand its export efforts, it is offering Saudi Arabia the advanced combat aircraft F-15 EX. Poland is also considering a similar proposal, while Israel is in negotiations for its own version of the combat aircraft, and the US has approved the sale of this aircraft to Indonesia.

War Zone reports that In Saudi Arabia, Boeing's aircraft is for the first time in competition with two European manufacturers: the Rafale aircraft by Dassault and the European Eurofighter Typhoon aircraft. Boeing's spokesperson clarified last week that the EX model is the most suitable for Saudi Arabia's air force, which is undergoing modernization processes and seeking a top-of-the-line aircraft.

The EX model will complement Saudi Arabia's existing fleet of F-15 aircraft, making the transition for pilots easy and swift.

<https://www.israeldefense.co.il/en/node/61908>

J. The United Arab Emirates

UAE enhances defence arsenal with HARM missile upgrade

Airforce Technology, May 8, 2024

Amidst escalating tensions and increasing geopolitical uncertainties in the Middle East, the United Arab Emirates (UAE) has taken a stride towards enhancing its defence capabilities with the approval of a \$144m (Dh528.5m) arms deal by the United States.

The agreement includes the acquisition of 149 WCU-33/B High-Speed Anti-Radiation Missile (HARM) Control Section Modification (HCSM) upgrade kits.

The Ukrainian Air Force has utilised the AGM-88 Highspeed Anti-Radiation Missiles (HARM) in its fight against Russia.

The upgraded HARM missiles will enhance the UAE's capability to defend its national borders, deter regional threats, and bolster air-to-surface defensive capabilities. The move reaffirms the partnership between the UAE and the United States and shows Washington's commitment to supporting its regional allies.

<https://www.airforce-technology.com/news/uae-enhances-defence-arsenal-with-harm-missile-upgrade/>

K. East Asia

South Korea considers joining alliance for sharing military technology with Australia, US and UK

AP News, May 1, 2024

South Korea is considering sharing advanced military technology with the United States, the United Kingdom and Australia through the so-called AUKUS partnership, South Korean Defense Minister Shin Won-sik said.

Shin said the possibility was discussed during two days of meetings between South Korea and Australia's defense and foreign ministers that ended in the Australian city of Melbourne on Wednesday.

The United States and the United Kingdom agreed in 2021 to provide Australia with a fleet of submarines powered by U.S. nuclear technology under the AUKUS agreement to counter a growing military presence from China. AUKUS is an acronym for Australia, the United Kingdom and the United States.

The countries could become involved in cooperation on a wider range of security technologies including artificial intelligence, electronic warfare and hypersonic systems through what is known as AUKUS Pillar 2.

<https://apnews.com/article/australia-south-korea-aukus-defense-cd80634c95c5b1aaa44c4f3d05cd79b3>

Partnership for ARC-100 commercialisation

World Nuclear News, May 2, 2024

A trilateral collaboration agreement has been signed to further cooperation between Korea Hydro & Nuclear Power, ARC Clean Technology and New Brunswick Power with the goal of establishing teaming agreements for global small modular reactor fleet deployment. It follows the signing of a memorandum of understanding last November.

Through the MoU signed last year, the three companies have been exploring collaboration opportunities for the commercialisation of ARC's ARC-100 - an advanced small modular reactor (SMR) - in Canada, South Korea, the USA and other jurisdictions where Korea Hydro & Nuclear Power (KHNP) has business operations.

The new collaboration agreement - signed during the *Reuters SMR and Advanced Reactor 2024 Conference* in Atlanta, Georgia - establishes firm commitments to deliverables, processes and timelines to advance discussions for participation and potential investment in the deployment of ARC units, starting with the commercial demonstration unit in the Canadian province of New Brunswick.

<https://www.world-nuclear-news.org/Articles/Partnership-for-ARC-100-commercialisation>

L. Southeast Asia

Brunei continues Air Force modernisation with H145M helicopters

Airforce Technology, May 2, 2024

Brunei has signed a deal with Airbus Helicopters to procure six H145M helicopters.

The selection of the H145M signifies Brunei's commitment to embracing new capabilities. Bruno Even, CEO of Airbus Helicopters, expressed gratitude for the decision, "We are greatly honoured by the selection of the

H145M to support the Royal Brunei Air Force's expanded missions," said Bruno Even, CEO of Airbus Helicopters.

"The H145M is well regarded for its high performance and versatility, and we are confident that it will bring a step change in operational readiness to Brunei."

This development follows the Royal Brunei Air Force welcoming two C295MW aircraft at the start of the year. The acquisition of Airbus's C295MW aircraft, as part of Brunei's defence modernisation efforts, shows the nation's intention to address regional stability, particularly in response to dynamics in the South China Sea.

<https://www.airforce-technology.com/news/brunei-continues-air-force-modernisation-with-h145m-helicopters/>

India-Indonesia strengthen defence partnership under Act East Policy

Financial Express, May 3, 2024

India and Indonesia, driven by their Comprehensive Strategic Partnership and aligned with India's Act East Policy, are intensifying their defence, maritime security and multilateral cooperation.

At the 7th India-Indonesia Joint Defence Cooperation Committee (JDCC) meeting on May 3, 2024 in Delhi, officials of both countries expressed satisfaction with their progress in defence collaboration. They reviewed the progress made on various bilateral defense cooperation initiatives discussed in meetings of Working Groups on Defense Cooperation and Defense Industries Cooperation.

Defence Secretary Giridhar Aramane and Secretary General of the Ministry of Defence, Indonesia, Air Marshal Donny Ermawan Taufanto, M.D.S. co-chaired the 7th India-Indonesia JDCC.

India-Indonesia Strengthen Defence Partnership under Act East Policy - Defence News | The Financial Express

Indonesia proposes cutting payments for S.Korea fighter jet project, Yonhap reports

The Statesman, May 9, 2024

South Korea is closely communicating with Indonesia regarding its adjusted proposal to reduce its cost-sharing for the KF-21 fighter jet programme, a foreign ministry official said on Thursday.

Indonesia has recently suggested to the Seoul government to cut its share of payment and pay about 600 billion won (US\$442.3 million) in total for the KF-21 jet project by 2026, a decrease from the initial 1.6 trillion won, Yonhap news agency reported.

“South Korea and Indonesia are continuing close communication and consultations between relevant authorities to smoothly conclude strategic cooperation projects, such as the joint development of fighter jet,” the official told reporters.

South Korea in close talks with Indonesia on KF-21 fighter jet project - The Statesman

Lockheed and Boeing seal deal with Malaysia for targeting pods

Airforce Technology, May 8, 2024

In a move to enhance Malaysia’s defence capabilities, Lockheed Martin Corporation and Boeing Company secured an \$80m (RM379.2m) contract with the Malaysian government to procure ten AN/AAQ-33 Sniper Advanced Targeting Pods.

The deal is set to modernise Malaysia’s F/A-18D platform.

According to Global Data’s intelligence on the Malaysian defence market, the Malaysian Air Force has eight F/AD-18D multirole aircraft. Malaysia acquired the aircraft from Boeing in 1997 and continues to operate the fleet, which was previously modernised in 2017.

The US State Department’s approval of the Foreign Military Sale is a reminder of

the United States’ commitment to supporting partners in the Indo-Pacific region.

<https://www.airforce-technology.com/news/lockheed-and-boeing-seal-deal-with-malaysia-for-targeting-pods/>

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