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India

ISRO is fast enlarging its role in developmental activities: Dr. Jitendra Singh

PIB Delhi, August 11, 2020

Union Minister of State (Independent Charge) Development of North Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh said here today that one of the major highlights of the Modi government has been that in the last six years, Indian Space Research Organization (ISRO) is no longer confined mainly to the launching of satellites, but it has been constantly enlarging its role in development activities, thus contributing to Prime Minister Narendra Modi's mission of "Transforming India". Briefing about the comparative improvement in the crop condition and increased productivity in the agriculture sector in the month of July 2019 vis a vis month of July 2020, because of the extensive use of data from remote sensing satellites, Dr Jitendra Singh said that the Normalized Difference Vegetation Index (NDVI), which is a proven indicator for vegetable/crop health or vigour, clearly shows better crop conditions during the month of July this year than what it was during the same month in the last year.

Dr Jitendra Singh recalled that over four years back, on the intervention of Prime Minister Narendra Modi, an extensive brain-storming exercise was held in the union capital wherein representatives from different Ministries and Departments were engaged in an intense interaction with scientists from ISRO and Department of Space in order to work out how best space technology could be utilized as a modern tool for supplementing, improving and expediting infrastructural development as well as implementation of various welfare schemes. Following this, he said, space technology is now being used in diverse sectors including Agriculture, Railways, Roads and Bridges, Medical management/telemedicine, procurement of timely Utilization Certificates, disaster forecast and management, weather/rain/flood forecast, etc. As for the agriculture sector, Dr Jitendra Singh informed that the ISRO technology is now also being used to carry out crop production forecast for at least eight major crops including wheat, Kharif and rabi rice, mustard, jute, cotton, sugarcane, rabi sorghum and rabi pulses.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1645080>

ISRO pays tribute to Dr Vikram Sarabhai by announcing that Chandrayaan 2 Orbiter has captured the Moon images of "Sarabhai" Crater

PIB Delhi, August 14, 2020

Union Minister of State (Independent Charge), Development of North Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh said here today that to mark the completion of one year of centenary celebrations of Dr Vikram Sarabhai, the Father of India's Space Programme, the Indian Space Research Organization (ISRO) has sought to pay tribute to him in a special way by announcing that Chandrayaan 2 Orbiter has

captured the Moon images of “Sarabhai” Crater. The birth centenary year of Dr Sarabhai completed on 12th of August and this is a thanksgiving tribute to him, said Dr Jitendra Singh and added that the recent achievements of ISRO, which have placed India as a frontline nation of the world is a vindication of Sarabhai’s visionary dream.

"Sarabhai" Crater is named after Dr Vikram Sarabhai and around 250 to 300 kilometres east of this Crater is where the Apollo 17 and Luna 21 Missions had landed. Dr Jitendra Singh said, it is heartening to note that on the eve of India’s 74th Independence Day, ISRO has made another contribution to add glory to India’s eventful Space journey which was valiantly initiated by Sarabhai and his team, despite several odds and constraints over six decades ago. He said, every Indian is filled with pride and confidence as inputs provided by India’s space missions are today being utilised even by those nations of the world who had started their space journey much longer before us.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1645866>

Kudankulam units 3 & 5 hit construction milestones

World Nuclear News, August 10, 2020

Indian contractor Larsen & Toubro has completed on schedule the installation of the 'dry shield' for the reactor pressure vessel of unit 3 of the Kudankulam nuclear power plant under construction in in Tamil Nadu. Separately, Russia's Atommash has announced the start of manufacturing a set of steam generators for unit 5 at the same plant.

The dry shield is a metal cylinder filled with serpentinite concrete that is placed around the reactor vessel. It serves to weaken the neutron flux, and also helps to prevent excessive heating of the reinforced concrete structure of the reactor shaft. The dry shield, which weighs 140 tonnes, was manufactured by JSC Tyazhmash in the city of Syzran, which is in the Samara region of Russia. Atommash, a subsidiary of Russia’s Rosatom, has started manufacturing a set of steam generators for unit 5. The company produced the same equipment for the third and fourth units. Each item has a diameter of more than 4 metres, a length of about 15m and a weight of 340 tonnes.

<https://www.world-nuclear-news.org/Articles/Kudankulam-unit-3-5-hit-construction-milestones>

Russia continues work on Kudankulam nuclear plant, training Indian pilots for manned spaceflight

Rezaul H Laskar

Hindustan Times, August 11, 2020

Russia has continued work on key bilateral projects with India amid disruptions caused by the Covid-19 crisis, delivering important components for the Kudankulam nuclear power plant and training Indian pilots for the Gaganyaan manned space mission. Atommash, part of the mechanical engineering division of the Rosatom State Atomic Energy Corporation, announced on Tuesday it had begun manufacturing a set of steam generators for the fifth power unit of the Kudankulam plant.

So far, Atommash has manufactured and shipped two sets of steam generators for the third and fourth units of the Kudankulam plant. Each reactor requires four generators, which are built to high safety standards and have a heat exchange surface with 11,000 stainless pipes. Russia is building the 6,000-MW project at the site in Tamil Nadu, which will have six VVER-1000 nuclear reactors, and it is in talks with India to construct six more at a new site that is yet to be identified. Two reactors at Kudankulam are currently operational and two more are being built. India signed a framework agreement with Rosatom for constructing the fifth and sixth units in 2017.

<https://www.hindustantimes.com/india-news/russia-continues-work-on-kudankulam-nuclear-plant-training-indian-pilots-for-manned-spaceflight/story-6I457MHHSYKlwsUn6qpwwK.html>

Progress at India's Kudankulam NPP

Nuclear Engineering, August 13, 2020

Indian contractor Larsen & Toubro (L&T India), with the technical assistance of Russian specialists, has completed the installation of the dry shielding at the reactor vessel for unit 3 of the Kudankulam NPP under construction in Tamil Nadu, Russia's Atomstroyexport (ASE) said on 11 August. Dry shielding is a cylindrical shield with a metal lining, filled with serpentinite concrete and located around the reactor vessel. It serves to weaken the neutron flux, and also helps to prevent excessive heating of the reinforced concrete structure of the reactor shaft. The equipment was manufactured by Russia's Tyazhmash in the city of Syzran. The weight of the cylindrical screen filled with serpentinite concrete is 140 tons.

Installation of the dry shield is an important technological operation in preparation for installation of the reactor support truss and other installation operations which take place before the reactor vessel is installed in the design position. Meanwhile, Russia's Atommash (part of Atomenergomash - the engineering division of Rosatom) has begun to manufacture a set of steam generators for unit 5. To date, Atommash has completed the machining of the shells and large pipes that make up the steam generator and welding work is underway. Atommash previously manufactured and shipped two sets of steam generators for Kudankulam 3&4.

<https://www.neimagazine.com/news/newsprogress-at-indias-kudankulam-npp-8080933>

China

China's Mars probe Tianwen-1 completes first mid-course correction

Cui Fandi

Global Times, August 2, 2020

Tianwen-1, China's first Mars probe, completed its first mid-course correction on Sunday, allowing it to continue heading toward the Red Planet precisely, according to the China National Space Administration (CNSA). The administration said that the maneuver took place at 7 am after its 3000N engine was activated for 20 seconds. By the time of the mid-course correction, the probe had

traveled approximately 230 hours. It was some 3 million kilometers away from Earth, with all systems reported as running normally, the administration said in a statement. "The first of many mid-course corrections ensures Tianwen-1's short-term stability on its orbit to Mars," commented Wang Yanan, chief editor of Aerospace Knowledge magazine.

Several more mid-course corrections and deep-space maneuvers are expected to be made during the probe's 6-month-plus space journey before reaching Mars' orbit, in order to ensure a smooth journey to the Red Planet. Orbit correction of a Mars rover is similar to that of an automobile, Zhu Qinghua, a deputy chief technician with the probe's orbiter system was quoted in a report by China News Service as saying. But "the difference is we need to correct not only the flight direction, but also the flight speed and other variables." This is much harder given that there are no road markings to refer to, Zhu said in the report. "The inner logic of orbit correction of a Mars rover is similar to that of a self-driving car," explained Wang. The difference, however, lies in that spacecrafts have more complex orbits, the adjustment of which requires effort from both the probe itself and the scientists on the ground.

<https://www.globaltimes.cn/content/1196445.shtml>

US-China relations: militaries carry out missile tests as tensions continue to simmer

Kristin Huang

South China Morning Post, August 5, 2020

China and the United States have conducted ballistic missile tests as the two nations remain locked in a bitter rivalry. The People's Liberation Army (PLA) Rocket Force fired two missiles – a DF-26 and a DF-16 – during a recent exercise, the official Chinese military news website 81.cn reported. It did not give an exact date for the tests. The DF-26 has a range of 4,000km (2,500 miles) and is China's first conventionally armed ballistic missile capable of striking Guam, a US territory in the western Pacific. The DF-16 is the PLA's most accurate short to medium range ballistic missile, designed to hit targets in Japan, including the US military bases in Okinawa. "We are in a highly alert state for combat, to ensure our actions are prompt and precise," Liu Yang, the commander of the brigade that carried out the tests, was quoted as saying.

The brigade also took part in an exercise to test their emergency response to an incoming nuclear attack, the report said. In January, the PLA Rocket Force tested its ability to launch a nuclear counter-attack from within a sealed underground missile facility. Meanwhile, the US Air Force Global Strike Command said it launched an unarmed intercontinental ballistic missile on Tuesday morning. The missile, fitted with three re-entry vehicles – which in wartime could be replaced with nuclear warheads – flew more than 6,000km from a base in California before splashing down at a US testing range in the Marshall Islands in the Pacific Ocean. According to a report by the Stockholm International Peace Research Institute published in June, the US has 5,800 nuclear warheads, more than any other country in the world.

<https://www.scmp.com/news/china/diplomacy/article/3096159/us-china-relations-militaries-carry-out-missile-tests-tensions>

Mainland China deploys more amphibious weapons along coast in Taiwan mission

Minnie Chan

South China Morning Post, August 5, 2020

A satellite image shows China's PLA has deployed many amphibious armoured vehicles to its newly established amphibious combined arms brigades in the Eastern Theatre Command across from Taiwan. A satellite image shows China's PLA has deployed many amphibious armoured vehicles to its newly established amphibious combined arms brigades in the Eastern Theatre Command across from Taiwan. The People's Liberation Army has deployed more amphibious weapon systems in mainland China's coastal cities across the strait from Taiwan in a sign that the armed forces are keen to play a key role in the long-standing mission to "reunify Taiwan", according to an analyst.

The amphibious brigades evolved from the first amphibious mechanised infantry division of the 71st Army Group, which split into three amphibious combined-arms brigades amid President Xi Jinping's military overhaul of 2017, according to a military source close to the PLA. However, rather than a blue colour, the green camouflage of the Type 05 amphibious armoured vehicles indicate they belong to the ground forces. The PLA ground forces have 13 army groups and many of the infantry divisions were split into nimble combined-arms brigades during the unprecedented military overhaul staged by Xi, who also chairs the powerful Central Military Commission. "The PLA ground forces want to play an active role in the Taiwan issue because so far their weapon systems are powerful enough to attack Taiwan without the help of missile force," Kanwa Asian Defence chief editor Andrei Chang said.

<https://www.scmp.com/news/china/military/article/3096179/mainland-deploys-more-amphibious-weapons-along-coast-long>

Chinese academician warns of 'nuclear-bomb like cyberattack' from US against 5G

Liu Caiyu

Global Times, August 5, 2020

While the US frequently accuses other countries of launching cyberattacks, including China, a Chinese academician said Wednesday that the real threat to cybersecurity is "cyberattack as deadly as a nuclear bomb" launched by the US, suggesting that a new computing system be constructed to defend against attacks on new infrastructure such as 5G. Malicious software like ransomware is a "piece of cake" compared to the violent cyber-terrorism carried out by anti-China forces, which threatens national security, Shen Changxiang, an academician at the Chinese Academy of Engineering and also an expert on the advisory panel for the Office of the Central Cyberspace Affairs Commission, said at the 2020 Internet Security Conference on Wednesday. Commenting on the essence of cybersecurity, Shen said, "Cyber warfare is now floating on the surface of the water. The US wants to create 'cyberattack as deadly as a nuclear bomb' and attempt to achieve 'cyber nuclear blackmail.'"

In Western countries, 5G networks, as new infrastructure, are regarded as future geopolitical weapons, and the US and some European nations often deliberately set up blockades and accuse

Chinese enterprises of posing national security threats in launching 5G construction. To deal with the cybersecurity threats against China's new infrastructure, Shen said the old methods of using firewalls, virus tracking and intrusion detection are not enough to deal with new threats, noting that a new computing system that fundamentally changes the principle of computing security defense is needed. Similar to humans' immune system, a "trusted computing" system using an intelligent security card can identify an "enemy" and destroy and exclude harmful substances from entering. The system uses a password to carry out functions such as identification, status measurement and secret storage, Shen said.

<http://www.globaltimes.cn/content/1196855.shtml>

PLA Rocket Force launches DF-26 'aircraft carrier killer' missile in fast-reaction drills

Liu Xuanzun

Global Times, August 6, 2020

The Chinese People's Liberation Army (PLA) Rocket Force recently launched a DF-26 intermediate-range anti-ship ballistic missile in an ongoing months-long exercise, after the US provocatively sent two aircraft carriers to the South China Sea for exercises and held joint naval drills with India, Japan and Australia in the Indian Ocean and Philippine Sea respectively in an attempt to contain China. Capable of striking moving targets at sea, the DF-26 has been dubbed an "aircraft carrier killer," and its exercise launch again demonstrated its deterrence and China's firm will in safeguarding national sovereignty and security, experts said.

A PLA Rocket Force missile brigade recently started a cross-regional confrontational exercise, as they maneuvered through complicated terrains such as forests, simulated hostile chemical attacks, disguised missile vehicles to avoid satellite detection and reached a desert area, where the troops received the order to launch a DF-26 missile, Chinese media reported over the past week. The exercises honed the fast-reaction capabilities of the Rocket Force troops, and this kind of mission will continue in the next one to two months, CCTV reported. Chinese military observers noted that this is a rare demonstration of a DF-26 launch. In January 2019, the launch of a DF-26 was shown to the general public in a China Central Television report for the first time.

<http://www.globaltimes.cn/content/1196944.shtml>

China's growing military power may make drone and cruise missile proliferation 'inevitable' in Asia-Pacific

Liu Zhen

South China Morning Post, August 8, 2020

Countries in Asia-Pacific are looking at developing small and smart weapons like drones and cruise missiles to deter China, making their proliferation "inevitable", a study has warned. "Although the proliferation of advanced weapons is normally a cause for concern regarding escalation, modern cruise missiles and UAVs [unmanned aerial vehicles] may today serve as weapons that smaller states can use to deter aggression from larger states," the paper from the International Institute of Strategic

Studies said, naming China as one of the main causes of concern. However, it also warned that the proliferation of these technologies increased the risk that they would fall into the hands of terrorists and extremists. International agreements such as the Missile.

Technology Control Regime (MTCR) are designed to restrict the development of ballistic missiles in the region. But the paper said developing countries, many of which are not signatories to the MTCR, could work together to develop these capabilities. China is a world leader in missile and drone technology, and the increased demand for these weapons is partly a response to Beijing's increasing power and the worsening security environment in the area, according to Zhao Tong, a fellow at the Carnegie-Tsinghua Centre for Global Policy. "These countries are not capable of developing a missile defence system. So to keep some sort of strategic deterrence or as anti-access/area-denial tools, they tend to develop some asymmetric attack weapons with a lower technological threshold, such as cruise missiles or drones, or even cooperate in such efforts," said Zhao. "As a result the situation will remain complicated for China." The MTCR aims to curb proliferation by limiting international cruise missile sales to weapons with a range of 300km (186 miles) or less and a payload of under 500kg (1,100lb) but does not stop countries developing their own weapons with a greater capacity.

<https://www.scmp.com/news/china/military/article/3096602/chinas-growing-military-power-may-make-drone-and-cruise-missile>

China plans to build a new university of science and technology amid US assault on Chinese tech

Global Times, August 11, 2020

Hunan Province in Central China unveiled a plan to construct a new university of science and technology amid the on-going China-US tech war, according to a three-year plan published on the website of Hunan provincial government. The new science and technology university is expected to be named after well-known Chinese scientist Qian Xuesen (1911-2009), who played a key role in China's missile and space program. To support the development of higher education in the region, the province is set to promote the construction of the university in Liuyang city, the plan states. Plans for the university have not yet been finalized, an official from the provincial educational department told the Global Times.

Qian Xuesen is known as the "Father of Chinese Rocketry" and was a member of both the Chinese Academy of Sciences and the Chinese Academy of Engineering. Chinese netizens have shown overwhelming supports for the new university, saying "Qian Xuesen's spirit could encourage the current young Chinese generation to overcome challenges posed by the US." Qian graduated from Shanghai Jiao Tong University in 1934. In 1935, he studied aviation at the Massachusetts Institute of Technology and later studied aviation engineering at the California Institute of Technology. The plan to construct a new university of science and technology comes amid the on-going China-US tech war and US' crackdown on Chinese tech companies and talents. "China needs top science and technology universities badly as US tightens restrictions on Chinese students and researchers," Zhao Qizheng, former director of China's State Council Information Office and once a nuclear physicist, told the

Global Times on Tuesday. Zhao was one of the first students to major in nuclear physics at the University of Science and Technology of China (USTC).

<http://www.globaltimes.cn/content/1197462.shtml>

High-mobility howitzers, anti-tank missiles make plateau debut

Liu Xuanzun

Global Times, August 11, 2020

The Chinese People's Liberation Army (PLA) recently held live-fire drills in a high-elevation region in the Himalayas, where some of the PLA's latest weapons, including a new 122-millimeter caliber wheeled howitzer and the vehicle-mounted version of the HJ-10 anti-tank missile system, made their first public appearances. Compared with their heavier counterparts, these two new weapons are characterized by high mobility, which will come in handy - particularly in plateau regions, analysts said.

A combined arms brigade attached to the PLA Tibet Military Command recently conducted a series of live-fire artillery exercises in the middle section of the Himalayas, which has an elevation of about 4,600 meters, China Central Television reported on Tuesday. The drills featured anti-aircraft shooting and precision artillery strikes on hostile headquarters, missile installations and communication hubs using long-range rocket launcher systems. This was followed by live-fire coverage of hostile positions, bunkers and camps with howitzers, according to the report. In addition to the new camouflage the soldiers wore, military observers also noticed the public debut of two new weapons: a 122-millimeter caliber wheeled howitzer and the vehicle-mounted version of the HJ-10 anti-tank missile system.

<https://www.globaltimes.cn/content/1197439.shtml>

US-China relations: American nuclear-capable stealth bombers deployed to Indian Ocean airbase

Liu Zhen

South China Morning Post, August 13, 2020

The US Air Force has deployed three B-2 stealth bombers to the tiny island of Diego Garcia in the Indian Ocean for the first time since 2016, as China continues to ramp up its live-fire military exercises. The American B-2A nuclear-capable Spirit bombers took off on Tuesday from the Whiteman air force base in Missouri, flew across northern Australia and on to the militarised atoll that forms part of the British Indian Ocean Territory. The aircraft were refuelled in the air several times, according to information from the US military.

The last time the bombers were deployed to Diego Garcia, which lies about 1,200km (745 miles) south of the Maldives, was four years ago during a period of tension in the South China Sea after an international arbitration tribunal rejected Beijing's claims to the disputed waters.

<https://www.scmp.com/news/china/military/article/3097277/us-china-relations-american-nuclear-capable-stealth-bombers>

Pakistan

Pakistan says mediation between Saudi and Iran going slowly

Reuters, August 3, 2020

Pakistan's U.S.-requested mediation efforts between Gulf rivals Saudi Arabia and Iran have been making slow progress, Prime Minister Imran Khan said. Prompted by Washington, former cricket great Khan in October visited Tehran and Riyadh to facilitate talks after attacks on Gulf oil interests that the United States blamed on Iran. "Our mediation between Iran and Saudi Arabia has not stopped and we are making progress, but slowly," Khan told Al Jazeera in extracts the broadcaster released from an interview to be aired in full on Wednesday.

"We have done our best to avoid a military confrontation between Iran and Saudi Arabia, and our efforts have succeeded," Qatar-based Al Jazeera also reported Khan as saying. Shi'ite Muslim Iran has long been at odds with U.S. Gulf Sunni Arab ally Saudi Arabia. U.S.-Iranian frictions worsened when President Donald Trump's administration withdrew in mid-2018 from an accord limiting Tehran's nuclear program in exchange for easing sanctions.

<https://in.reuters.com/article/mideast-iran-pakistan-saudi/pakistan-says-mediation-between-saudi-and-iran-going-slowly-idINKBN24Z1OQ>

USA

United States Tests Intercontinental Ballistic Missile

The Defence Post, August 4, 2020

The United States on Tuesday successfully tested an unarmed Minuteman III intercontinental ballistic missile (ICBM) in a launch directed from an airborne command center, the Air Force said. The missile was launched at 12:21 am (0721 GMT) from Vandenberg Air Force Base in California, traveling 6,700 kilometers (4,200 miles) over the Pacific Ocean before landing in the sea near the Marshall Islands. "The test demonstrates that the United States' nuclear deterrent is safe, secure, reliable and effective," the Air Force said in a statement.

"Airmen... were aboard the US Navy E-6 aircraft to demonstrate the reliability and effectiveness" of the airborne launch control system, it said. Colonel Omar Colbert, commander of 576th Flight Test Squadron, said "the Minuteman III is 50 years old, and continued test launches are essential." "This visible message of national security serves to assure our allies and dissuade potential aggressors," he said. The Air Force added that test launches were "not a response or reaction to world events or regional tensions."

<https://www.thedefensepost.com/2020/08/04/us-ballistic-missile/>

Judge upholds Virginia's uranium mining ban

World Nuclear News. August 4, 2020

Virginia's 38-year-old moratorium on uranium mining will continue following a district court ruling in a case challenging its constitutionality. Virginia Uranium Inc first brought the state suit in 2015 in its effort to mine what it claims is the largest known uranium deposit in the USA. In a 6-9 July hearing at the Wise County and City of Norton Circuit Court, Virginia Uranium Inc claimed the moratorium unconstitutionally took the company's private property, had no compelling governmental interest and, by being overly expansive, took more of its property than was necessary.

However, in his opinion published on 30 July, Judge Chadwick Dotson upheld the moratorium on the grounds that while the ban does deprive its owners of property rights, the state has a compelling interest to do so. "Absent the mining moratorium, the mineral estate is estimated to be worth at least USD427 million, whereas with the mining moratorium, the mineral estate is worth exponentially less," he said. However, he added: "There really can be no argument that a moratorium on uranium mining, which is an inherently dangerous activity with potentially dangerous interdict effects, achieves the Commonwealth's rightful duty to protect the public from injury and to protect the health, safety, and welfare of the citizenry.

<https://www.world-nuclear-news.org/Articles/Judge-upholds-Virginias-uranium-mining-ban>

As Hiroshima bombing turns 75, a look at 6 changes to nuclear arms under Trump

Kim Hjelmgaard

USA Today, August 4, 2020

Three days later, on Aug. 9 at 11:02 a.m. local time, a second atomic bomb, named "Fat Man," was unleashed by the U.S. over Nagasaki, Japan. This time, 40,000 people died straight away – within five years, the number of deaths approached 140,000, according to archived estimates by the U.S. Department of Energy. The Hiroshima death toll reached an estimated 200,000 by 1950 as those who survived the blast succumbed to fatal burns, radiation sickness and various cancers.

Three-quarters of a century later, tensions, complications and uncertainties over nuclear weapons and how to ensure they are not used again are still very much with us. Fred Carriere, who teaches international relations at Syracuse University, said that one of the major impediments to getting countries to denuclearize, whether the U.S., North Korea or Iran, is that "everybody always wants everything up front, with the promise that good things will follow later on, but few will ever be able to accept this strategy."

<https://www.usatoday.com/story/news/world/2020/08/04/hiroshima-bombing-turns-75-six-nuclear-arms-changes-under-trump/5533700002/>

Optimus: a versatile option

Nuclear Engineering, August 5, 2020

NAC international unveiled its new Optimus transport packaging at the 2020 Waste Management conference in Phoenix, Arizona in March. Enhanced capabilities were built into its design following consultation with customers, and so were improvements derived from lessons learned by NAC over many years of on-site, field and over-the-road activity. Once licensed, it will provide a tailored system for handling and transporting nuclear materials and waste. An array of Optimus designs will offer a wide range of modular shielding options for fissile materials, transuranics (TRU), high activity intermediate-level waste and low-enriched uranium fuel.

We believe Optimus is a versatile, low-cost nuclear waste and material transport solution for commercial and government customers, which is required in an environment where the nuclear industry faces constant pressure to reduce costs while dealing with an expanding nuclear waste assortment. The nuclear industry is expected to decommission dozens of facilities and reactors over the next decade. Optimus offers options to help dispose of varied classes of waste. This accelerated decommissioning trend is already well under way in Europe and Asia. In North America, the USA has shuttered several plants, some prematurely, and will ramp up reactor decommissioning in 2030 as plants reach the end of their licences and operating lives.

<https://www.neimagazine.com/features/featureoptimus-a-versatile-option-8063809/>

U.S. Examines Whether Saudi Nuclear Program Could Lead to Bomb Effort

Mark Mazzetti, David E. Sanger and William J. Broad

The New York Times, August 5, 2020

American intelligence agencies are scrutinizing efforts by Saudi Arabia to build up its ability to produce nuclear fuel that could put the kingdom on a path to developing nuclear weapons. Spy agencies in recent weeks circulated a classified analysis about the efforts underway inside Saudi Arabia, working with China, to build industrial capacity to produce nuclear fuel. The analysis has raised alarms that there might be secret Saudi-Chinese efforts to process raw uranium into a form that could later be enriched into weapons fuel, according to American officials.

As part of the study, they have identified a newly completed structure near a solar-panel production area near Riyadh, the Saudi capital, that some government analysts and outside experts suspect could be one of a number of undeclared nuclear sites. American officials said that the Saudi efforts were still in an early stage, and that intelligence analysts had yet to draw firm conclusions about some of the sites under scrutiny. Even if the kingdom has decided to pursue a military nuclear program, they said, it would be years before it could have the ability to produce a single nuclear warhead.

<https://www.nytimes.com/2020/08/05/us/politics/us-examines-saudi-nuclear-program.html>

USNC, Korean companies to develop micro modular reactors

World Nuclear News, August 5, 2020

The MMR is a 15 MW thermal, 5 MW electrical high-temperature gas-cooled reactor (HTGR), drawing on operational experience from reactors developed by China, Germany, Japan and the USA. It consists of two plants: the nuclear plant that generates heat, and the adjacent power plant that converts heat into electricity or provides process heat for industrial applications. The USNC system is designed to be simple, with minimal operations and maintenance requirements, and no on-site fuel storage, handling, or processing. The MMR uses fuel in prismatic graphite blocks and has a sealed transportable core. Cooperation between USNC, HEC and KAERI under the MoU will focus on two primary areas: development and deployment of HTGR technology for supplying power as well as process-heat production, critical to the operations of industrial processing plants); and, development and deployment of a very-high-temperature gas-cooled reactor (VHTR) system for production of hydrogen for use in fuel cells. Under the MoU, the three companies will make equal contributions to the development of the power plant.

The agreement also includes investigating applications for the MMR technology in South Korea. USNC noted the current USNC MMR design remains the focal point of any deployment that may be considered in the country. "We are committed to combining the simple, elegant design of our MMR with state-of-the-art energy-production technologies from around the world," said USNC CEO Francesco Venneri. "Working with leaders like Hyundai Engineering and KAERI on advanced nuclear reactor technologies will improve the overall performance and value of our MMR, and accelerate our path to wide-scale deployment."

<https://www.world-nuclear-news.org/Articles/USNC-Korean-companies-to-develop-micro-modular-reactor>

Jacobs to assist Moltex in development of SSR

World Nuclear News, August 6, 2020

USA-based Jacobs Engineering Group has been selected by Moltex Energy to support its development of the Stable Salt Reactor (SSR), a 300 MWe small modular reactor design. Jacobs will build a bespoke experimental facility for thermal transfer testing at its Birchwood Park research and development facility near Warrington, UK. The SSR is unlike the original US Molten Salt Reactor Experiment and its descendants, which use fuel dissolved in a molten fluoride or chloride salt, which also functions as the reactor's coolant and operates at atmospheric pressure. UK-based Moltex's design instead holds the molten fuel salt inside fuel pins very similar to those used for normal MOX fuel. Heat transfer from the outside of the fuel pin to the heat exchangers is effectuated by a second, non-fissile molten salt.

Moltex says this eliminates a range of problems associated with 'traditional' MSR, which must handle a hot, highly radioactive fluid of changing chemical composition while ensuring maintainability over the lifetime of the reactor. Moltex's SSR instead circulates a largely inert coolant salt at atmospheric pressure through the reactor - which it says is much easier to operate and maintain, with leaks presenting much lower risks - whilst having the advantages of a liquid fuel within the pins. The isotropy, even as burn-up progresses, eliminates traditional issues of solid fuel

deformation and cladding breaches, as well as avoids the intense local overpressure within the solid fuel from gaseous fission products.

<https://www.world-nuclear-news.org/Articles/Jacobs-to-assist-Moltex-in-development-of-SSR>

Pompeo says U.N. Security Council to vote next week on extending Iran arms embargo

Michelle Nichols, Humeyra Pamuk

Reuters, August 6, 2020

The United Nations Security Council will vote next week on a U.S. bid to extend an international arms embargo on Iran, Secretary of State Mike Pompeo said on Wednesday, despite the warnings of some diplomats that the measure lacks support. U.S. Secretary of State Mike Pompeo speaks during a news conference at the State Department in Washington, U.S. August 5, 2020. Pablo Martinez Monsivais/Pool via Reuter. The arms embargo on Iran is currently set to end on Oct. 18 under Tehran's 2015 nuclear deal with world powers, which U.S. President Donald Trump's administration quit in 2018.

The U.S.-drafted resolution needs at least nine votes in favor to force Russia and China to use their vetoes, which Moscow and Beijing have signaled they will do. Some diplomats question whether Washington can even secure those nine, however. "The United States will put forward a resolution in the Security Council to extend the arms embargo on Iran," Pompeo told reporters. "The proposal we put forward is eminently reasonable. One way or another we will do the right thing. We will ensure that the arms embargo is extended."

<https://in.reuters.com/article/usa-iran/pompeo-says-u-n-security-council-to-vote-next-week-on-extending-iran-arms-embargo-idINKCN25206I>

Final canister of nuclear waste transferred to storage facility at San Onofre

Rob Nikolewski

San Diego Union Tribune, August 7, 2020

It took 32 months to complete but the transfer operations that moved canisters filled with spent radioactive fuel, or waste, from wet storage pools to a newly constructed dry storage facility at the San Onofre Nuclear Generating Station wrapped up Friday. Shortly before 5 a.m., workers lowered the 73rd and final canister into its assigned enclosure at the north end of the plant, known as SONGS for short.

At commercial nuclear plants, after fuel used to generate electricity loses its effectiveness, operators place the assemblies in a metal rack that is lowered into a pool, typically for about five years. Once cooled, the fuel can be transferred to a dry storage facility, which is generally considered a safer place for it. Officials Southern California Edison, the operator at SONGS, said completing the transfers is a key part of the company's eight-year plan to dismantle most of the structures at the plant, which has not produced power since 2012 and is being decommissioned.

<https://www.sandiegouniontribune.com/business/story/2020-08-07/final-canister-of-nuclear-waste-transferred-to-san-onofre-storage-facility>

Final used fuel transfer marks SONGS decommissioning milestone

World Nuclear News, August 11, 2020

The last of 73 multi-purpose canisters (MPC) containing used fuel was transferred to the Holtec HI-STORM UMAX storage system on 7 August. In addition to the 73 MPCs, 50 canisters of used fuel are in a TN-NUHOMS dry storage system. With the transfer of the final MPC most of the plant is now a deconstruction site, Southern California Edison (SCE) said. Dismantlement activities have already begun, and building demolition is expected to start early in 2021. According to Holtec, SCE selected the subterranean MPC system primarily because of its "demonstrable indestructibility under any conceivable threat", including earthquake intensity levels greater than any ever recorded. Enhancements to support the transfer of used fuel from wet to dry storage developed for the SONGS project are now being used across the Holtec fleet, the company said. These include the development of a new training programme, detailed loading procedures with process improvements and the development and implementation of camera systems and load monitoring equipment. The used fuel will ultimately be transported to an off-site facility when one becomes available, and SCE Vice President and Chief Nuclear Officer Doug Bauder said the company remains committed to ensuring it is safely stored until then. "We are developing a strategic plan to help us explore opportunities for advancing various alternatives to get the spent fuel off-site, as well as make sure that our fuel is ready for pickup when the opportunity presents itself," he said.

SCE expects to release the strategic plan early next year. This will explore alternatives for relocating San Onofre's used fuel to an off-site facility either for permanent disposal or temporary storage. Holtec is working to establish the HI-STORE consolidated interim storage facility (CISF) in southeastern New Mexico, which would use a similar subterranean storage system to that at San Onofre. In addition, the MPCs in use at SONGS are licensed for transport and are ready to be shipped to a CISF when one becomes available, Holtec said. Removal of used fuel from shuttered nuclear power plants allows the full site to be returned to more productive use, it added. SONGS units 2 and 3 were permanently retired in June 2013 owing to regulatory delay and uncertainty after problems were found in replacement steam generators.

<https://www.world-nuclear-news.org/Articles/Final-used-fuel-transfer-marks-SONGS-decommissioni>

Three Mile Island owner agrees to public decommissioning panel but no financial settlement

Wallace McKelvey

Pennsylvania Real-Time News, August 11, 2020

State regulators have reached a settlement with the owners of Three Mile Island's Unit 2, the nuclear reactor that partially melted down in 1979, that includes the creation of a decommissioning advisory panel. The settlement, the result of concerns raised by a proposed license transfer, did not go as far as similar ones in California and Massachusetts that included financial guarantees and other safeguards designed to ensure the potentially decades-long cleanup is completed.

“You’d think a settlement to create a citizens advisory board would include input from citizens — this agreement was negotiated in a cave,” said longtime citizen watchdog Eric Epstein. Epstein joined the state Department of Environmental Protection in opposing FirstEnergy’s plan to transfer its license for Unit 2 to the Utah-based EnergySolutions for decommissioning.

<https://www.pennlive.com/news/2020/08/three-mile-island-owner-agrees-to-public-decommissioning-panel-but-no-financial-settlement.html#:~:text=Three%20Mile%20Island%20owner%20agrees%20to%20public%20decommissioning%20panel%20but%20no%20financial%20settlement,-Updated%20Aug%202011&text=State%20regulators%20have%20reached%20a,of%20a%20decommissioning%20advisory%20panel.>

Feds Propose More Sites For Nuke Waste Storage (Not Disposal)

Ed Hirs

Forbes, August 11, 2020

The Nuclear Regulatory Commission (NRC) is proposing that more locations around the country be used to dispose of very low-level radioactive waste. This proposal has raised the ire of environmentalists and nuclear waste storage proponents alike. In past generations the NRC (and its predecessor, the Atomic Energy Commission), worked to limit unnecessary hazards to public health. It has fought against the moral hazard that pervades nuclear power. For example, it succeeded in shutting down three nuclear reactors at Millstone Power Station in Connecticut where the operator had decided that cheap trumped safe.

One intractable problem has been what to do with spent fuel rods, which generate very significant levels of radiation for a long time. They come only from nuclear power plants. Recycling of the fuel in the rods is feasible but not pursued and, for the most part, these spent rods are stored onsite while the reactors operate and even after decommissioning.

<https://www.forbes.com/sites/edhirs/2020/08/11/hazardous-nuclear-waste-storage-its-not-disposal/#3c5de4034ad3>

Chevron announces investment in nuclear fusion start-up Zap Energy

Power Technology, August 13, 2020

Oil major Chevron has announced an investment in Zap Energy, a nuclear fusion start-up company developing a next-generation modular nuclear reactor. With this Series A investment, Chevron will join other companies such as Italy’s Eni and Equinor which have also backed nuclear fusion startups to reduce their carbon footprint, Reuters reported. The company has not disclosed the financial details of the investment.

Established in 2018, Zap Energy says it aims to research and develop nuclear reactors and advance cost-effective, flexible, and commercially scalable fusion. The company’s technology uses sheared flows to confine and compress the plasma used in the fusion process. Chevron invested in Zap

Energy through Chevron Technology Ventures. This arm of the company invests in business solutions with the potential to support and enhance how Chevron produces and delivers cleaner energy. Chevron Technology Ventures president Barbara Burger said: “We see fusion technology as a promising low-carbon future energy source. “Our Future Energy Fund investment in Zap Energy adds to Chevron’s portfolio of companies we believe are likely to have a role in the energy transition.

<https://www.power-technology.com/news/chevron-announces-investment-nuclear-fusion-start-up-company-zap-energy/>

Used fuel transferred to storage at US San Onofre NPP

Nuclear Engineering, August 13, 2020

The 73rd and final multi-purpose canister (MPC) of used nuclear fuel from Southern California Edison’s (SCE’s) twin unit San Onofre Nuclear Generating Station (SONGS) in the USA has been placed in its designated below-grade storage vault., US-based Holtec International said on 7 August. Holtec International is contractor for the decommissioning of San Onofre, which was closed by SCE in 2013 in face of regulatory delays and after serious safety issues were discovered with its steam generators. The fuel transfer is seen as an interim step towards eventual relocation at a federal off-site facility once it is constructed.

“Our commitment remains ensuring spent nuclear fuel is safely stored and that it can be transported to an off-site facility in the future,” said Doug Bauder, SCE vice president and chief nuclear officer. “We are developing a strategic plan to help us explore opportunities for advancing various alternatives to get the spent fuel off-site, as well as make sure that our fuel is ready for pickup when the opportunity presents itself.” SCE expects to release the strategic plan early next year, which will consider alternatives for relocating the used fuel to an off-site facility. The options will include permanent disposal or temporary storage at a site. All of the used fuel is now contained in 123 canisters in dry storage. which allows SCE to focus on dismantling SONGS. SCE issued a deconstruction notice in January and began work to dismantle the plant in February. The first projects completed include asbestos removal from inside the containment domes and shipping the unit 1 reactor pressure vessel to a disposal facility in Utah.

<https://www.neimagazine.com/news/newsused-fuel-transferred-to-storage-at-us-san-onofre-npp-8081676>

U.N. Security Council Rejects U.S. Proposal to Extend Arms Embargo on Iran

Michael Schwartz

The New York Times, August 14, 2020

The United States suffered an embarrassing diplomatic defeat on Friday when the United Nations Security Council rejected a proposal to indefinitely extend an arms embargo on Iran, with even America’s strongest allies refusing to buckle under pressure from the Trump administration to take a harder line. The defeat underscored America’s deepening global isolation on the issue of Iran. But for

the Trump administration, the vote could open a separate path to try to inflict maximum damage on Iran ahead of November's U.S. presidential election.

For months, Trump administration officials have warned that if the vote to extend the embargo failed, the United States would try to invoke a provision built into the Obama-era nuclear accord to punish any Iranian violations by reimposing all sanctions lifted when the deal took effect. That could include the prohibition of not just arms deals, but also oil sales and banking agreements. In theory, all U.N. members would have to adhere to the sanctions. The provision, known as a snapback, would be devastating for Iran, which is already struggling with a moribund economy made worse by the coronavirus. Pursuing the snapback would also put the Trump administration at odds with America's allies, which vehemently oppose it as legally dubious and potentially destabilizing to the region.

<https://www.nytimes.com/2020/08/14/world/middleeast/UN-Iran-embargo.html>

U.S. loses Iran arms embargo bid as Putin pushes summit to avoid nuclear deal showdown

Michelle Nichols, Gabrielle Tétrault-Farber

Reuters, August 14, 2020

The United States lost a bid on Friday to extend a U.N. arms embargo on Iran as Russian President Vladimir Putin proposed a summit of world leaders to avoid "confrontation" over a U.S. threat to trigger a return of all U.N. sanctions on Tehran. In a U.N. Security Council vote, Russia and China opposed extending the weapons ban, which is due to expire in October under a 2015 nuclear deal between Iran and world powers. Eleven members abstained, including France, Germany and Britain, while Washington and the Dominican Republic were the only yes votes.

"The Security Council's failure to act decisively in defense of international peace and security is inexcusable," U.S. Secretary of State Mike Pompeo said in a statement. China's U.N. Ambassador Zhang Jun said in a statement after the vote that the result "once again shows that unilateralism receives no support and bullying will fail." The United States could now follow through on a threat to trigger a return of all U.N. sanctions on Iran using a provision in the nuclear deal, known as snapback, even though President Donald Trump abandoned the accord in 2018. Diplomats have said the United States could do this as early as next week, but would face a tough, messy battle. "In the coming days, the United States will follow through on that promise to stop at nothing to extend the arms embargo," U.S. Ambassador to the United Nations Kelly Craft said in a statement. Diplomats have said such a move would put the fragile nuclear deal further at risk because Iran would lose a major incentive for limiting its nuclear activities. Iran already has breached parts of the nuclear deal in response to the U.S. withdrawal from the pact and unilateral sanctions. Iran's U.N. Ambassador Majid Takht Ravanchi warned the United States against trying to trigger a return of sanctions.

<https://in.reuters.com/article/usa-iran-un/u-s-loses-iran-arms-embargo-bid-as-putin-pushes-summit-to-avoid-nuclear-deal-showdown-idINKCN25A25V>

What is the U.S. threat to trigger 'snapback' of U.N. sanctions on Iran?

Michelle Nichols

Reuters, August 15, 2020

The United States on Friday failed in its attempt to extend a U.N. arms embargo on Iran, and Washington could now act on a threat to trigger a return of all U.N. sanctions on Tehran. Here is a look at the events leading to the showdown and an explanation of what could happen next.

WHY IS THE ARMS EMBARGO ON IRAN EXPIRING?

The United Nations Security Council imposed an arms embargo on Iran in 2007. The embargo is due to expire in mid-October, as agreed to under the 2015 nuclear deal among Iran, Russia, China, Germany, Britain, France and the United States that prevents Tehran from developing nuclear weapons in return for economic sanctions relief. That accord is enshrined in a 2015 Security Council resolution. In 2018, U.S. President Donald Trump quit the accord reached under his predecessor Barack Obama, calling it “the worst deal ever.” The United States failed on Friday in a bid to extend the arms embargo on Iran at the U.N. Security Council.

<https://www.reuters.com/article/us-usa-iran-un-arms-explainer/what-is-the-us-threat-to-trigger-snapback-of-un-sanctions-on-iran-idUSKCN25A2Z2>

Europe

Low water levels may curb output at France's Chooz nuclear reactors -RTE

Reuters, August 10, 2020

Production may be reduced at EDF’s Chooz nuclear reactors in northern France on Saturday due to high temperatures lowering the water level on the Meuse River, French grid operator RTE said on Monday. The two reactors produce 1.45 gigawatts (GW) of power each. The shortfall could be equal to the production of one unit, RTE said. The heat wave is forecast to peak at 37 degrees Celsius in the region on Wednesday, with temperatures falling as the week progresses, according to Meteo France’s weather forecast. Consumption in France is projected to reach 44.7 GW on Saturday, RTE data showed. French nuclear availability is currently at 60.6% of total capacity, with 24.6 GW offline.

<https://in.reuters.com/article/france-nuclear/low-water-levels-may-curb-output-at-frances-chooz-nuclear-reactors-rte-idINL8N2FC5XG>

E.ON sells German nuclear power ahead at above-market prices

Reuters, August 12, 2020

German utility E.ON (EONGn.DE) said on Wednesday it has sold forward 73% of its 2021 nuclear power generation and 46% of its 2022 output at prices above the current wholesale market, raising earnings prospects from that segment. The company has to date also sold some 91% of output in the current year from reactors at its Preussen Elektra unit, it showed in presentation slides on reporting second-quarter financial results.

Production in 2020 was sold at 46 euros (\$53.93) per megawatt hour (MWh) after 2019's locked-in price had been 33 euros. Hedge rates of forward production volumes are tracked by wholesale market traders and analysts to assess volumes tied up with counterparties and the value of future production.

<https://in.reuters.com/article/us-eon-results-hedgerates/e-on-sells-german-nuclear-power-ahead-at-above-market-prices-idINKCN2580NJ>

French heatwave takes Golfech 2 reactor offline

Reuters, August 12, 2020

High temperatures caused EDF's Golfech 2 reactor in southern France to go offline on Wednesday, French grid operator RTE said. The Golfech nuclear power plant's two reactors each produce 1.3 gigawatts (GW) of electricity, with the Golfech 1 reactor already offline since Monday for planned maintenance. EDF's use of water is regulated by law to protect plant and animal life. It is obliged to reduce output during hot weather when water temperatures rise, or when river levels and the flow rate are low. RTE said that high temperatures could halt reactor 2 later in the day, after previously warning an outage might occur from Tuesday. The grid's website later showed that Golfech 2 was unavailable and would be offline for 24 hours.

<https://in.reuters.com/article/france-nuclear/update-1-french-heatwave-takes-golfech-2-reactor-offline-idINL8N2FE339>

Small amount of chemicals disposed of at UK Sellafield nuclear site

Reuters, August 14, 2020

Sellafield Ltd said on Friday that specialists are at its Magnox reprocessing site in northwest England to dispose of a small amount of chemicals after a routine inspection. The chemical, organic peroxide, is used across many industries and was stored at the reprocessing plant, segregated from the nuclear operations of the plant. The reprocessing plant was evacuated as a precautionary measure on Thursday. The plant was not in operation at the time, Sellafield Ltd said in a statement.

"Chemical monitoring is undertaken across the site to understand changing chemical states and to inform when and how industrial chemicals should be stored or disposed of," the company said. "The risk has been identified as a conventional safety issue rather than a nuclear safety risk," it added. Sellafield is a former nuclear power generating site. The Magnox plant at the site is due to close this year. It processes and separates plutonium and uranium.

<https://in.reuters.com/article/britain-nuclear/small-amount-of-chemicals-disposed-of-at-uk-sellafield-nuclear-site-idINL8N2FG4EJ>

Bomb disposal experts help dispose of chemicals at UK nuclear site

Reuters, August 14, 2020

Bomb disposal experts have been called to the Sellafield nuclear reprocessing plant to help dispose of chemicals stored at the site that were discovered to have “changed state” during a routine inspection, the British government said. The chemical, organic peroxide, is used across many industries and was stored at the Magnox reprocessing site in northwest England, segregated from the nuclear operations of the plant. “During a routine investigation we noted that the chemical had changed state,” Sellafield Ltd. said in a statement. “The plan, as advised by EOD (Explosive Ordnance Disposal), is to burn the chemicals in a prepared incineration pit on a part of the site away from any buildings or infrastructure.”

The incineration was expected to be complete. The reprocessing plant was evacuated as a precautionary measure on Thursday. The plant was not in operation at the time, Sellafield Ltd said. “Chemical monitoring is undertaken across the site to understand changing chemical states and to inform when and how industrial chemicals should be stored or disposed of,” the company said.

<https://in.reuters.com/article/britain-nuclear/bomb-disposal-experts-help-dispose-of-chemicals-at-uk-nuclear-site-idINKCN25A26F>

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<https://in.reuters.com/article/britain-nuclear/bomb-disposal-experts-help-dispose-of-chemicals-at-uk-nuclear-site-idINKCN25A26F>

Russia

Moscow says US global deployment of land missiles will prompt Russia’s quick reaction

TASS News Agency, August 3, 2020

Washington's deployment of land-based short-and intermediate-range missiles in various regions around the world will provoke an immediate reaction from Russia, the Russian Foreign Ministry said Monday.

"It is clear that deployment of American land-based short-and intermediate-range missiles globally seriously undermines regional and global security and will provoke a new dangerous phase of the arms race. Russia cannot ignore appearance of more missile threats for its territory which will be seen as strategic for us. This will require an immediate reaction, irrespective of what missiles will be deployed, nuclear or not," the ministry said in a comment, marking the anniversary of termination of the Intermediate-Range Nuclear Forces Treaty (INF Treaty). The ministry highlighted, "the only reasonable and <...> justified step forward is to look together for a mutually acceptable settlement of the current situation through political and diplomatic means." "Russia remains open to equal and constructive work to restore trust and strengthen international security and strategic stability. We are hoping for a similar interest and responsibility from the US side," the diplomatic agency underlined.

<https://tass.com/politics/1185331>

Ostrovets plant set for fuel loading

World Nuclear News, August 6, 2020

The Nuclear and Radiation Safety Department of the Belarusian Emergencies Ministry (Gosatomnadzor) has issued a permit for the loading of fresh fuel into unit one of the nuclear power plant under construction near Ostrovets in the Grodno region. It consists of two VVER-1200 reactors that are scheduled for commissioning this year and next. ASE, the engineering arm of Russian state nuclear corporation Rosatom, is the general designer and main contractor of the project to build what will be Belarus's first nuclear power plant.

Announcing the issuance of the permit, ASE said today that an inspection by Gosatomnadzor had confirmed the readiness of the unit's systems, equipment, documentation and personnel for its physical start-up. In the coming days, the first of 163 fuel assemblies will be loaded into the reactor. An intergovernmental agreement between Russia and Belarus specifically on cooperation in the construction of a nuclear power plant in Belarus was signed in March 2011.

<https://www.world-nuclear-news.org/Articles/Ostrovets-plant-set-for-fuel-loading>

'Catch Icebreaker' mission. How teacher became mate on nuclear-powered vessel

TASS News Agency, August 6, 2020

Russia is the only country, which has a fleet of nuclear-powered icebreakers - the 50 Let Pobedy, the Yamal, the Vaigach, the Taimyr, and the Sevmorput LASH carrier and container ship. Female crew members are not rare. But a captain is. Marina Starovoitova was lucky to become the Yamal's second mate.

After party right on board

"You know, the sea is catching," Marina told me as we met. "Take for example the Kara Sea, where we work most often. It is cold, with frequent fogs and storms, it's normally under ice, and in the Ob Bay water is always murky. Or take the Barents Sea - the color of aquamarine, crystal with turquoise, but very severe. Every sea has its own character, like every ship or every person". She has been 'at seas' since 2005. Right from a school, where she had worked as a teacher of the Russian Language and Literature, Marina came to Murmansk. She prepared all papers, passed an interview with the Murmansk Shipping Company, which back then managed the entire civil fleet in Murmansk, and started working on the Sevmorput nuclear-powered container carrier as a keeper on duty. This is how her marine career began. A coincidence? No, she says, it's the fate.

<https://tass.com/society/1186195>

Fuel loading starts at Belarusian reactor

World Nuclear News, August 7, 2020

Following fuel loading, the reactor will be brought to the minimum controlled power level (1% of the total power capacity) and relevant tests will be performed. From that moment on, the reactor acquires the status of a nuclear power facility, Rosatom said. After the reliability and safety of the power unit according to its design parameters have been verified, the power start-up stage will begin and the reactor will be connected to the grid for the first time. "The Republic of Belarus has become the owner of a power unit built according to the latest Gen 3+ technologies," Rosatom Director General Alexey Likhachov said on the occasion of the start of fuel loading. "This technology has been proved and tested through the operation of similar power units in Russia. They meet all the post-Fukushima safety requirements, and all the International Atomic Energy Agency (IAEA) missions have recognised their reliability. It is very important to us that we have built the first VVER-1200 unit abroad in the Republic of Belarus, a good neighbour of ours."

The Belarusian NPP construction project is being implemented in an open and transparent manner, Rosatom said. "The power plant meets all the IAEA safety requirements. Belarus is cooperating with the management and experts of the organisation regularly, and it also interacts with representatives of the European Commission and the European Nuclear Safety Regulators Group (ENSREG). Overall, in 2012-2020, seven key IAEA missions, which are recommended for countries building their first nuclear power plants, were carried out," it said. Unit 1 is the first unit of the newest Gen 3+ built using Russian technologies abroad. Currently, three power units of this type are in operation in Russia: two at the Novovoronezh plant and one at the Leningrad plant. Furthermore, in July, construction was completed and start-up operations began at the fourth Russian Gen 3+ power unit - Leningrad unit 6.

<https://www.world-nuclear-news.org/Articles/Fuel-loading-starts-at-Belarusian-NPP>

Leningrad II-2 passes WANO pre-start peer review

World Nuclear News, August 11, 2020

Announcing the successful completion of the review, Russian state nuclear corporation Rosatom said today that, during the inspection, the team of international experts checked the operational, fire and emergency readiness of the unit, as well as the level of safety culture among the plant's personnel. Hossein Ghaffari, head of the Atomic Energy Organisation of Iran's office in Russia, said: "This is a pre-launch check, and our task has been to help the personnel of the Leningrad NPP to better prepare for this important event. As an industry advisor, I took part in a tour of the unit's control room and turbine hall, and before that my colleagues checked the equipment and facilities that are of prime importance for the start-up of the power unit.

"The results of these checks confirm that the unit is ready to begin full-scale commissioning operations. The quality of the documentation and the level of personnel training here is rather high, and the Leningrad NPP project confirms that the increased safety requirements that are now imposed on the power units under construction have been fully implemented here." Physical start-up began at the VVER-1200 on 19 July when the first fuel assembly with fresh nuclear fuel was loaded into the reactor vessel. At the subsequent stages, during the power start-up, pilot operation and comprehensive testing of the power unit, all systems will undergo final checks. The unit is scheduled to be put into commercial operation in 2021.

<https://www.world-nuclear-news.org/Articles/Leningrad-II-2-passes-WANO-pre-start-peer-review>

Nuclear powers should once again declare inadmissibility of nuclear war — Lavrov

TASS News Agency, August 12, 2020

Russia is working with other nuclear powers to once again confirm the principle of inadmissibility of nuclear war, Russian Foreign Minister Sergey Lavrov said in an interview with the Argumenty i Fakty daily published on Wednesday. Russia's top diplomat said the situation in the global security and strategic stability domain had been deteriorating rapidly.

"Time-tested mechanisms of control over strategic weapons are being destroyed. Military doctrines of certain states once again leave open the possibility of limited use of nuclear weapons," he said. In his words, those tendencies appear primarily as a result of Washington's determination to ensure its global dominance by all means and create a dangerous illusion that the United States can win a nuclear war. Russia, on its part, is trying to explain the possible consequences of such behavior.

<https://tass.com/politics/1188573>

US, Russia to hold meeting on strategic stability in Vienna on August 17-18

TASS News Agency, August 14, 2020

US President Donald Trump's Special Envoy for Arms Control Marshall Billingslea is set to hold talks on strategic stability with Russian Deputy Foreign Minister Sergey Ryabkov in Vienna on August 17-18, the US Department of State said in a statement Friday.

"Special Presidential Envoy for Arms Control Ambassador Marshall Billingslea will travel to Vienna, Austria August 17-18 to meet with Russian Deputy Foreign Minister Sergey Ryabkov on mutually agreed topics related to the future of nuclear arms control," the statement reads.

<https://tass.com/politics/1189719>

Putin says there is no place for blackmail and diktat in Persian Gulf

TASS News Agency, August 14, 2020

Any side's blackmail and diktat is inadmissible in the Persian Gulf and in any other place in the world, Russian President Vladimir Putin said in a statement posted on the Kremlin's website on Friday. In his statement, the Russian leader called for jointly overcoming problems arising in the region.

"In that region [the Persian Gulf], like in any other point in the world, there must be no place for anyone's blackmail and diktat. Unilateral approaches towards searching for solutions do not help," Putin stressed. As the Russian leader recalled, in 2019 Russia submitted a renewed concept of security in the Persian Gulf, which "stipulated specific ways for effectively resolving the tangle of problems in that region."

<https://tass.com/politics/1189791>

Russian Foreign Ministry invites Trump to look at Putin's initiative on Iran

TASS News Agency, August 15, 2020

The Russian Foreign Ministry invited US President Donald Trump to take a look at Russian President Vladimir Putin's initiative on convoking an online summit on Iran and the nuclear deal, while the US top diplomat 'is busy.' "@realDonaldTrump [US President Donald Trump], we've heard you haven't been informed of @KremlinRussia_E [President of Russia]'s proposal. In a nutshell: We propose to ensure security in the Persian Gulf," the ministry said in a Twitter post, attaching a link to the relevant document in English.

"Keep calm and follow @mfa_russia [Russian Foreign Ministry] to stay informed when @SecPompeo [US Secretary of State Michael Pompeo] is busy," Russian diplomats said. Trump told reporters on Friday he was not yet informed about Putin's initiative.

<https://tass.com/politics/1189921>

West Asia Iran

No effective action taken within INSTEX: expert

Tehran Times, August 3, 2020

In an interview with ISNA published on Monday, Mirtaher said that the financial mechanism has been launched for a year and a half, however, no effective action has been taken based on it. Pointing to theory of the good cop, bad cop routine, he said that both the United States and Europe seek to stop Iran's nuclear program but have adopted different policies. Apparently, INSTEX has been designed to facilitate legitimate trade with Tehran. It was introduced on January 31, 2019, by France, Germany, and Britain, the three European countries party to the nuclear deal. INSTEX was supposed to be a financial channel and a special mechanism for transferring money in spite of U.S. sanctions on Iran. Its objective was to facilitate Iran's transactions with European companies.

<https://www.tehrantimes.com/news/450833/No-effective-action-taken-within-INSTEX-expert>

Atomic opportunities given to Iran by NPT are absolutely legitimate: Russia

Tehran Times, August 3, 2020

Mikhail Ulyanov, Russia's permanent representative to the Vienna-based international organizations, has said that atomic opportunities given to Iran by the Non-Proliferation Treaty (NPT) are absolutely legitimate. "The atomic opportunities were given to Iran by #NPT. These opportunities and capabilities are absolutely legitimate as long as they are used for peaceful purposes. The duty of IAEA is to certify non-diversion of nuclear materials. Those who disagree with that work against NPT," Ulyanov tweeted. His remarks came as a response to a tweet by Mark Dubowitz, CEO of the Foundation for Defense of Democracies, who claimed that when experts talk about concerns they mean the Iran Standard of the JCPOA, the 2015 nuclear deal, which gave a the country this atomic capability.

<https://www.tehrantimes.com/news/450849/Atomic-opportunities-given-to-Iran-by-NPT-are-absolutely-legitimate>

JCPOA Joint Commission may meet in the near future

Tehran Times, August 4, 2020

The Joint Commission on the Joint Comprehensive Plan of Action (JCPOA) on Iran's nuclear program is considering the possibility of holding an in-person meeting in the near future, Russian Deputy Foreign Minister Sergei Ryabkov told TASS. "An in-person meeting is possible, it is under consideration," he pointed out. "No date has been set yet but it's not a matter of distant future," Ryabkov added.

According to Ryabkov, the meeting's date will depend on the further easing of lockdown measures, including transport restrictions. The previous meeting of the JCPOA Joint Commission, which involved political directors, took place in the Austrian capital of Vienna in February 2020.

<https://www.tehrantimes.com/news/450900/JCPOA-Joint-Commission-may-meet-in-the-near-future>

Iranian parliament preparing plan to stop NPT Additional Protocol

Tehran Times, August 5, 2020

The head of the Parliament National Security and Foreign Policy Committee announced on Wednesday that the parliament has put on its agenda a double-urgency plan to stop implementation of the Additional Protocol to the NPT in Iran by the International Atomic Energy Agency. “The double-urgency plan to stop implementing the Additional Protocol is on the agenda of the Majlis presiding board,” Mojtaba Zolnour said, according to IRNA.

Abbas Moghtadaei, the deputy chairman of the Parliament National Security and Foreign Policy Committee, said on July 11 that the parliament has prepared a plan to stop the voluntary implementation of the Additional Protocol.

“This plan has been prepared in the format of urgency based on which voluntary implementation of the Additional Protocol will be stopped and the government is obliged to observe it,” Moghtadaei said. Moghtadaei said that the plan has been drawn up in response to the United States and Europe’s excessive demands. Iran’s parliament issued a statement in June strongly condemning an anti-Iran resolution by the International Atomic Energy Agency’s Board of Governors, asking the government to stop implementing the Additional Protocol, which allows surprise inspections of nuclear sites. “The Islamic Consultative Assembly strongly condemns resolution of the International Atomic Energy Agency’s Board of Governors which was proposed by three European countries of England, France, and Germany under the pressure of the ruling regime in the United States and the fake Zionist regime. It [the parliament] considers the resolution another example of structural discrimination by the international agency,” the statement read. The statement was signed by 240 MPs.

<https://www.tehrantimes.com/news/450932/Iranian-parliament-preparing-plan-to-stop-NPT-Additional-Protocol>

New US Iran envoy Elliot Abrams joins fight to block Tehran’s weapon access

Ephrem Kossaify

Arab News, August 08, 2020

Elliot Abrams, the veteran diplomat taking over as US envoy to Iran, is entering the role at a crucial moment in the battle to curtail Tehran’s military power. Secretary of State Mike Pompeo announced Thursday that Brian Hook would be handing over the role to Venezuela envoy Abrams, an eminent Iran hawk who will serve in both roles. The transition takes place at a time when the US is struggling to win unanimous support at the UN for a formal extension of a ban on weapon sales to Iran, which expires in October.

Hook’s resignation after a year and a half in the job comes during times of increased tensions between the US and Iran. His departure puts an end to any chance for a diplomatic initiative with Iran before the end of Donald Trump’s term. His replacement, Abrams, is one of the most prominent US neoconservative figures and an outspoken critic of the 2015 Iran nuclear deal. The deal agreed with international powers and known as the Joint Comprehensive Plan of Action (JCPOA), aimed to

restrict Iran's atomic program in return for an easing of crippling sanctions. Opponents, including Trump, said the agreement allowed Iran to continue developing ballistic missiles and freed up funds for the regime's aggressive foreign policy in the Middle East. Trump pulled the US out of the deal in 2018. Abrams had accused Barack Obama, the president who oversaw the agreement, of basing the deal on his so-called Cuba model. "Hand a lifeline to a regime in deep economic trouble and ignore the population of the country and their quest for human rights and decent government," he wrote in 2015.

"Call it a historic achievement, and above all don't bargain hard for recompense. For, you see, in these openings to Iran and Cuba we are only righting the historical wrongs America has committed and for which we need to apologize." Of immediate concern for the US and its allies is trying to seal an extension to the UN arms embargo. Abrams is expected to help campaign for such an extension as the US introduces a new resolution at the Security Council next week, while European nations continue to express fears that an embargo renewal would lead Iran to leaving the nuclear deal.

<https://www.arabnews.com/node/1716596/middle-east>

Tehran urges IAEA to shed light on Saudi 'covert' nuclear program

Tehran Times, August 9, 2020

Iran's ambassador to the Vienna-based International Atomic Energy Agency (IAEA) on Saturday called on the UN nuclear watchdog body to shed light on Saudi Arabia's "covert" nuclear activities. "Despite the fact that Saudi Arabia is a member of the Non-Proliferation Treaty and has a comprehensive bilateral safeguard agreement with the Agency, it has unfortunately refused to abide by its commitments to the Agency's inspections despite repetitive calls," Kazem Gharibabadi said, according to Tasnim. Gharibabadi urged the IAEA to carry out investigations and submit a full report on the status of nuclear activities in the Saudi kingdom. Raising alarm about Riyadh's nuclear ambitions, the ambassador said the international community will not accept Saudi "deviation" from a peaceful nuclear program and will confront it.

The comments came after American intelligence agencies reportedly said they had spotted an undeclared nuclear site near Saudi Arabia's capital Riyadh, scrutinizing attempts by the kingdom to process uranium and move toward the development of atomic bombs. The site is situated in a secluded desert area not too far from the Saudi town of al-Uyaynah, 30 kilometers northwest of Riyadh, and its Solar Village. In a report on July 21, al-Jazeera said the Saudis announced in early 2018 that they had broken ground on a small research reactor that would be operational by the end of 2019. Bloomberg News reported that satellite photos taken in March and May of this year revealed that the Saudis have built a roof over the reactor - a development that is alarming nuclear experts because Saudi Arabia has not yet invited the IAEA to monitor the site and inspect the reactor's design. "What it does tend to infer is problematic," said Paul Dorfman, honorary senior research fellow at the Energy Institute, University College London. "Key to IAEA surveillance and regulations is signing up to non-proliferation treaties. In other words, questions of enrichment and how you deal with substances that flow out of nuclear reactors in terms of future weaponization." Saudi Arabia has signed the NPT, which obligates it to have a Comprehensive Safeguards Agreement

with the IAEA. But those agreements do not allow IAEA inspectors to visit whenever they like on short notice.

<https://www.tehrantimes.com/news/451028/Tehran-urges-IAEA-to-shed-light-on-Saudi-covert-nuclear-program>

Iran mocks U.S. claims about countering WMDs

Tehran Times, August 9, 2020

Iranian Foreign Ministry spokesman Abbas Mousavi on Sunday mocked the United States for its claims of countering weapons of mass destruction (WMDs), saying the U.S. has atomic bombing of Hiroshima and Nagasaki on its record. In a tweet, Mousavi said that the world still remembers attacks on the two Japanese cities. The United States launched the first atomic bomb in a devastating attack on the city of Hiroshima on August 6, 1945. Thousands of people were killed underneath a deadly mushroom cloud. Three days later on August 9, a second atomic bomb was dropped on Nagasaki, killing thousands more and pushing Japan to surrender during World War Two. It was the last nuclear bomb used in armed conflict.

In a tweet on the occasion of the 75th anniversary of the atomic bombing, Leader of the Islamic Revolution Ayatollah Ali Khamenei said that several books can and should be written about the crimes of the armies of the arrogant powers. “In August 1945, the United States instantly killed 100,000 people with an atomic bomb in the city of Hiroshima!” the Leader said. Ayatollah Khamenei said, “This is the nature of an arrogant, irreligious, atheistic, and immoral army,” adding, “If one wants to talk about the crimes of the armies of the arrogant powers, several books can and should be written.”

<https://www.tehrantimes.com/news/451039/Iran-mocks-U-S-claims-about-countering-WMDs>

Iran says GCC call for Tehran arms embargo extension is 'unrealistic'

Reuters, August 10, 2020

Iran has rejected as “unrealistic” a call by the Gulf Cooperation Council (GCC) for the United Nations to extend an international arms embargo on Tehran that ends in October, state TV reported on Monday. The GCC, made up of Bahrain, Kuwait, Oman, Qatar, the United Arab Emirates and Saudi Arabia, said on Sunday that Iran’s continued interference in neighbouring countries made an extension necessary. The arms embargo is currently set to end on Oct. 18 as part of Tehran’s 2015 nuclear deal with world powers, which the United States quit in 2018. “The GCC is currently at the apex of its incompetence and its unrealistic policies have rendered it ineffective,” Iran’s Foreign Ministry spokesman Abbas Mousavi told a televised news conference.

<https://in.reuters.com/article/usa-iran-sanctions-gulf/iran-says-gcc-call-for-tehran-arms-embargo-extension-is-unrealistic-idINKCN2560MO>

Iran nuclear deal at risk as U.N. council prepares to vote on arms embargo

Michelle Nichols
Reuters, August 10, 2020

The U.N. Security Council is preparing to vote this week on a U.S. proposal to extend an arms embargo on Iran, a move that some diplomats say is bound to fail and put the fate of a nuclear deal between Tehran and world powers further at risk.

A last-minute attempt by Britain, France and Germany to broker a compromise with Russia and China on an arms embargo extension appeared unsuccessful so far, diplomats said. Russia and China, allies of Iran, have long-signaled opposition to the U.S. measure.

A Chinese diplomat at the United Nations, speaking on condition of anonymity, said that “extending the arms embargo on Iran in whatever form lacks legal basis and will undermine efforts to preserve” the nuclear deal, adding that there is “no chance” the U.S. text will be adopted. U.S. Ambassador to the United Nations Kelly Craft said Russia and China wanted to benefit from the end of the arms embargo. “Russia and China are waiting to be able to sell arms to Iran,” Craft told Fox News.

<https://in.reuters.com/article/usa-iran-un/iran-nuclear-deal-at-risk-as-u-n-council-prepares-to-vote-on-arms-embargo-idINKCN257064>

Iran rejects claims about partial removal of sanctions

Tehran Times, August 11, 2020

Iranian Foreign Ministry spokesman Abbas Mousavi has rejected claims that the so-called non-targeted sanctions have been partially removed. “Based on the JCPOA [the 2015 nuclear deal] and Resolution 2231 [of the UN Security Council which endorses the JCPOA], the United States is duty bound to lift all the sanctions it has imposed after withdrawal from the JCPOA,” he told reporters. Mousavi described claims about partial removal of sanctions as fake and called the U.S. unilateral sanctions “cruel” and “illegal”.

“We have to make the enemies understand that they cannot bring us to knees by sanctions and they have no other way but to accept the logic and truth. That day will not be far and we will gain success through patience and resistance,” Rouhani said during a cabinet meeting.

<https://www.tehrantimes.com/news/451133/Iran-rejects-claims-about-partial-removal-of-sanctions>

Book on Iranian nuclear scientist Majid Shahriari published in Arabic

Tehran Times, August 11, 2020

“Martyr of Science”, a book written about Iranian nuclear scientist Majid Shahriari, has recently been published in Arabic. The book has been translated by Hassan Matar and published by Tamkin Publications in Iraq. The Arabic version of the book will be distributed in Iraq and Lebanon in collaboration with the Iranian firm, Raheyar Publications. In the book, relatives, friends, students and

colleagues recount memories of Shahriari. He was also collaborating with the Atomic Energy Organization of Iran (AEOI). Shahriari was assassinated in Tehran on November 29, 2010.

<https://www.tehrantimes.com/news/451096/Book-on-Iranian-nuclear-scientist-Majid-Shahriari-published-in>

U.N. Security Council starts Iran arms embargo vote, result Friday

Michelle Nichols

Reuters, August 14, 2020

The United Nations Security Council started voting on Thursday on a U.S. bid to extend an arms embargo on Iran, which is opposed by veto-powers Russia and China, and the result will be announced at a meeting on Friday, diplomats said. The 15-member council has been operating virtually amid the coronavirus pandemic so states have 24 hours to cast a vote.

The 13-year-old arms embargo is due to expire in October under a 2015 nuclear deal among Iran, Russia, China, Germany, Britain, France and the United States that prevents Tehran from developing nuclear weapons in return for sanctions relief.

In a bid to gain more council support, the United States slashed its draft resolution on Tuesday to just four paragraphs that would simply extend a weapons ban on Tehran “until the Security Council decides otherwise,” saying it’s “essential to the maintenance of international peace and security.” But diplomats and analysts said the draft text was still likely to fail. To be adopted a resolution needs at least nine votes in favor and no vetoes by Russia, China, the United States, Britain or France. If the United States is unsuccessful it has threatened to try and trigger a return of all U.N. sanctions on Iran using a provision in the nuclear deal, even though Washington quit the accord in 2018. The move could put the already fragile nuclear accord further at risk.

<https://in.reuters.com/article/uk-usa-iran-un/u-n-security-council-starts-iran-arms-embargo-vote-result-friday-idINKCN259343>

Letting U.S. destroy nuclear deal would be return to law of jungle, Zarif warns

Tehran Times, August 14, 2020

Iranian Foreign Minister Mohammad Javad Zarif warns that allowing the U.S. to go to the full length of its ill-intentioned campaign to destroy the historic 2015 nuclear deal between Iran and world powers promises return to the law of jungle. Zarif made the comments in an article he wrote in the French newspaper Le Monde published on Wednesday, Press TV reported. Through its obdurate campaign to bring about the total annihilation of the agreement, the United States is threatening to devastate what is left of multilateralism and international law, he wrote. Zarif reminded that the deal was made to address all concerns regarding “the exclusively peaceful nature of our nuclear program,” while freeing the Iranian people from inhumane and unjust sanctions. Ever since, the U.S. has also been threatening other countries into toeing its sanction line and abandoning their legal trade with Iran. Zarif said in the article that as a result of the U.S. behavior, Iran has been the target of “the most

vicious and indiscriminate sanctions.” The U.S. has slapped the harshest sanctions in history against Iran. The purpose behind the sanctions is to strangle the Iranian economy.

The U.S. “inflexibility and unpredictability” have nothing to do with the precepts of the “game theory,” in which players are expected to take rational decisions, Zarif said, adding that Washington is just after punishing any party, which adheres to international law.

“Whether in the case of its domestic mismanagement of COVID-19 or the undermining of peace and stability abroad, the current administration in Washington has no real plans other than to blindly attack all those who defend the rule of law,” the article read. The top diplomat concluded that with its current behavior, the United States is just shying away from offering any prospect for the future of the global community, and warned that it is “neither desirable nor viable” to allow Washington a free hand in its actions.

<https://www.tehrantimes.com/news/451214/Letting-U-S-destroy-nuclear-deal-would-be-return-to-law-of-jungle>

Iran says U.S. humiliated by rejection of U.N. arms embargo extension

Reuters, August 15, 2020

Iran’s president said on Saturday the United States suffered a humiliating defeat with the U.N. Security Council’s refusal to extend an arms embargo on Tehran, while U.S. Secretary of State Mike Pompeo called the action a “serious mistake.” In a U.N. Security Council vote on Friday on the U.S. effort to extend the world body’s arms embargo on Iran, Russia and China voted against, while 11 members abstained including France, Germany and Britain.

The United States and the Dominican Republic were the only votes in favour. “I don’t remember the United States preparing a resolution for months to strike a blow at the Islamic Republic of Iran, and it garners only one vote,” Iranian President Hassan Rouhani said in a televised speech. “But the great success was that the United States was defeated in this conspiracy with humiliation.”

<https://in.reuters.com/article/usa-iran-isolation/iran-says-u-s-humiliated-by-rejection-of-u-n-arms-embargo-extension-idINKCN25B0IZ>

Israel

Israel says it thwarted foreign cyber attack on defence industry

Rami Ayyub

Reuters, August 12, 2020

Israel said it thwarted a cyber-attack on its defence industry by a hacking group known as Lazarus, which the United States says is run by North Korean intelligence. Israel’s Defence Ministry said hackers posing as potential employers sent job offers to defence workers trying to infiltrate their

networks and gather sensitive information. The group built fake profiles on the LinkedIn network to disguise its hackers and separately attempted to hack Israeli defence firms via their websites, the ministry statement said.

The attacks were identified in real time and thwarted with no disruption to the companies' networks, it added, without identifying the firms or saying when the incidents took place.

Israel said the group was backed by a foreign country, but did not name it. Washington has said Lazarus operates for the RGB, North Korea's primary intelligence bureau.

<https://in.reuters.com/article/us-israel-cyber-attack/israel-says-it-thwarted-foreign-cyber-attack-on-defence-industry-idINKCN25825T>

Israel, UAE to normalise relations in shift in Mideast politics; West Bank annexations on hold

Maha El Dahan, Jeffrey Heller, Steve Holland

Reuters. August 13, 2020

Israel and the United Arab Emirates announced on Thursday that they will normalise diplomatic ties and forge a broad new relationship, a move that reshapes the order of Middle East politics from the Palestinian issue to the fight against Iran. Trump's special envoy Brian Hook called the agreement a "nightmare" for Iran. An Iranian official said the agreement would not secure peace in the region. Railing against "criminal Israel", Hossein Amir-Abdollahian, a special adviser to Iran's parliamentary speaker, said in a tweet: "Abu Dhabi's behaviour has no justification, turning back on the Palestine cause. W/ that strategic mistake, #UAE will be engulfed in Zionism fire." Iran and Israel are arch foes.

Israel is particularly concerned about suspected Iranian efforts to develop nuclear weapons, which Tehran denies. Iran is also involved in proxy wars from Syria to Yemen, where the UAE has been a leading member of the Saudi-led coalition opposing Iran-aligned forces there. With a population of less than 10 million but the Arab world's second-largest economy thanks to oil, the UAE has exerted growing commercial and military clout in the Gulf and the wider region over the past two decades, much of it aimed at confronting Islamist militants and the influence of Iran. Delegations from Israel and the United Arab Emirates will meet in the coming weeks to sign agreements regarding investment, tourism, direct flights, security, telecommunications and other issues, the joint statement said. "Everybody said this would be impossible," Trump said. "Now that the ice has been broken, I expect more Arab and Muslim countries will follow the United Arab Emirates' lead," Trump added.

<https://in.reuters.com/article/israel-emirates/israel-uae-to-normalise-relations-in-shift-in-mideast-politics-west-bank-annexations-on-hold-idINKCN259278>

UAE

UAE's first power reactor achieves criticality

World Nuclear News, August 1, 2020

Since receipt of an operating licence from the Federal Authority for Nuclear Regulation (FANR) in February, and the completion of fuel assembly loading in March, Nawah has been progressing through a testing programme, prior to completing the start-up of the unit. Mohamed Al Hammadi, chief executive officer of ENEC, said this was a "truly historic" moment for the UAE. "It is the culmination of more than a decade of vision, strategic planning and robust programme management. Despite the recent global challenges, our team has demonstrated outstanding resilience and commitment to the safe delivery of unit 1. We are now another step closer to achieving our goal of supplying up to a quarter of our nation's electricity needs and powering its future growth with safe, reliable, and emissions-free electricity."

Agneta Rising, director general of World Nuclear Association, said: "This is a great achievement for all those working at Barakah. The reactors there will generate clean electricity, highly skilled jobs and economic growth for many decades. Barakah will soon be joined by reactors under construction in Belarus, Bangladesh and Turkey. We need to see this repeated again and again in more newcomer countries to have truly effective decarbonisation and deliver a cleaner and economically stronger tomorrow." The UAE is the first country in the Arab world, and the 33rd nation globally, to develop a civil nuclear power programme. ENEC said the Barakah plant is significantly contributing to the nation's efforts to move towards the electrification of its energy sector, and the decarbonisation of electricity production. When fully operational, the plant will produce 5.6 GW of electricity while avoiding the release of more than 21 million tonnes of carbon emissions every year that would otherwise have been produced using fossil fuels.

<https://www.world-nuclear-news.org/Articles/UAEs-first-power-reactor-achieves-criticality>

UAE launches start-up operations at first nuclear power plant

Reuters, August 1, 2020

The United Arab Emirates has begun start-up operations in the initial unit of its first nuclear power plant, the Emirates Nuclear Energy Corporation (ENEC) said. The Barakah nuclear power plant in Abu Dhabi, a major oil producer, is being built by Korea Electric Power Corporation (KEPCO). The plant was originally due to open in 2017 but start-up of its first reactor was repeatedly delayed. ENEC said its subsidiary Nawah Energy Company "has successfully started up Unit 1 of the Barakah Nuclear Energy Plant, located in the Al Dhafrah Region of Abu Dhabi."

The ruler of Dubai, Sheikh Mohammed bin Rashid al-Maktoum, wrote on Twitter that nuclear fuel had been loaded into the first of four units of what he called "the first peaceful nuclear energy reactor in the Arab world." "We are now another step closer to achieving our goal of supplying up to a quarter of our nation's electricity needs and powering its future growth with safe, reliable, and emissions-free electricity," ENEC's chief executive Mohamed Ibrahim al-Hammadi said.

<https://in.reuters.com/article/emirates-nuclearpower/uae-launches-start-up-operations-at-first-nuclear-power-plant-idINKBN24X3LO>

Firing up of UAE's Barakah power plant to usher new age of nuclear energy

Arab News, August 4, 2020

The Barakah nuclear facility is expected to add 5,600 megawatts of electricity to the UAE power grid when all of its four reactors become operational. The UAE firing up of the Barakah power plant's first nuclear reactor will usher in a new era of clean energy, according to an Arab News straw poll. Nearly 70 percent of those who responded said they believed the launch of the Barakah facility was the beginning of a new era of energy production. But one third of those polled said they doubted there would be any change in the current energy regime.

The UAE became the first nuclear energy capable nation in the Arab world after switching on the country's first nuclear reactor at the Barakah plant in Abu Dhabi emirate. Unit 1 is set to be connected to the UAE power grid and supply electricity in the next testing phase. The Barakah facility, tucked 280 kilometers away from Abu Dhabi in the Al-Dhafra region, is expected to add 5,600 megawatts of electricity to the UAE power grid when all of its four reactors become operational as the country works to improve its environmental reputation.

<https://www.arabnews.com/node/1714476/offbeat>

East Asia

Japan

In milestone year, A-bomb survivor keeps up fight for nuclear disarmament

Akiko Okamoto

Reuters, August 3, 2020

Three days after the hydrogen bomb attack in Hiroshima, the Nagasaki blast killed about 27,000 instantly and more than 70,000 by the end of the year. Japan surrendered six days later. For nearly 50 years, Tanaka has been speaking out for nuclear disarmament hoping that his experiences as a witness to one of the only two nuclear bombs ever to be used in conflict would serve to end their potential use. In this 75th year since the war ended, the coronavirus pandemic has disrupted some key events, such as a New York exhibition that Tanaka helped to organise.

Instead, Tanaka, who served as head of the "Hidankyo" victims' group for more than 20 years, has turned online to spread his message, with the unexpected benefit of reaching a broader audience. But he worries that time is running out. "After all the atomic bomb survivors are gone, I'm worried whether people will be able to really understand what we have experienced," he said.

<https://in.reuters.com/article/ww2-anniversary-nagasaki-survivor/in-milestone-year-a-bomb-survivor-keeps-up-fight-for-nuclear-disarmament-idINKBN24Z0BL>

Japan set to mark 75 years since Hiroshima, Nagasaki atomic bombing

Reuters, August 4, 2020

75 years since the United States unleashed the world's first atomic bomb attack on the city of Hiroshima, followed three days later by the second and last on Nagasaki, vapourising lives, buildings and Japan's capacity for war. Archive footage shows pre-bomb Hiroshima as a bustling, thriving city of trilby-topped gentlemen boarding trams, ladies dressed in elegant kimonos, and uniformed schoolchildren walking beneath cherry blossoms overhanging shopping streets. After the blast, rubble and contorted metal stretch almost uninterrupted to the horizon. Electricity poles and bare trees accompany the dotted handful of windowless buildings which appear to have withstood the impossible.

Japan will commemorate the 75th anniversary of the bombing of the two cities on Aug. 6 and Aug. 9 this year. In previous years, Prime Minister Shinzo Abe and the city mayors attended annual memorial services and renewed pledges for a nuclear-free world. Bells tolled and a minute's silence was observed at the exact time the bombs detonated in both cities. Commemorations this year will be scaled back due to the COVID-19 pandemic, with fewer seats and video messages from dignitaries.

<https://in.reuters.com/article/iran-britain-detainee/australian-envoy-visits-detained-british-australian-academic-in-iran-reports-she-is-well-idINKCN2500SK>

In a flash, a changed world: Remembering Hiroshima

Reuters, August 4, 2020

The atomic bomb the United States dropped on Hiroshima on Aug. 6, 1945 killed tens of thousands and flattened the Japanese city in an instant. "Little Boy," as it was known, was the endpoint of years of research, wrangling a physics theory into a mechanism that would release the energy that binds together atoms. The concept was simple: driving together enough uranium or plutonium at high enough speeds would create a "critical mass" so quickly that it would start an uncontrolled, nearly instantaneous chain reaction of neutrons knocking apart atomic nuclei.

Each atom's lost mass is converted to energy at a staggering exchange rate. Only 1.09kg of the 64kg of uranium in Little Boy became energy, but it was the equivalent of detonating 15,000 tons (13.6 million kg) of TNT, according to Los Alamos National Laboratory calculations. About one square mile of Hiroshima was flattened, crushed by the hammer blow of Little Boy detonating about 580 metres (1,900 ft) overhead. Nearly everyone in that area died instantly. Farther away, the bomb's heat ignited buildings and people, and deadly radiation bloomed. Since World War Two, no country has attacked another with a nuclear weapon. But at least eight have developed them. More than 2,000 nuclear weapons have been detonated in experiments since 1945. Thousands of nuclear weapons now sit in arsenals around the world, ready to deploy by aircraft or missile. The Arms Control Association estimates that there are nearly 14,000 such weapons, although of these only a third or so could be immediately used in a war.

<https://in.reuters.com/article/ww2-anniversary-hiroshima-graphic/in-a-flash-a-changed-world-remembering-hiroshima-idINKCN2501SP>

Hiroshima marks 75 years since atomic bombing in scaled-back ceremony

Elaine Lies

Reuters, August 6, 2020

Bells tolled in Hiroshima on Thursday for the 75th anniversary of the world's first atomic bombing, with ceremonies downsized due to the coronavirus and the city's mayor urging nations to reject selfish nationalism and unite to fight all threats. Though thousands usually pack the Peace Park in the centre of the Japanese city to pray, sing and offer paper cranes as a symbol of peace, entrance was sharply limited and only survivors and their families could attend the memorial ceremony. The city said the significance of the anniversary of the bombing that killed 140,000 people before the end of 1945 had prompted its decision to hold the ceremony despite the spread of the virus, but taking strict precautions.

<https://in.reuters.com/article/ww2-anniversary-hiroshima/hiroshima-marks-75-years-since-atomic-bombing-in-scaled-back-ceremony-idINKCN25206M>

U.N.'s Nakamitsu urges Japan to consider nuke treaty ban

Hajimu Takeda

The Asahi Shimbun, August 6, 2020

For Izumi Nakamitsu, skipping a visit to Hiroshima and Nagasaki to commemorate atomic bomb victims because of the pandemic and strict travel regulations was not an option. The U.N. undersecretary general and high representative for disarmament affairs arrived in Japan to attend an Aug. 6 peace memorial service for atomic bomb victims in Hiroshima. "This year marks the 75th anniversary of the atomic bombing, and the United Nations is also celebrating the 75th anniversary of the organization.

For us to send a message this milestone year is important," Nakamitsu said about the significance of her visit. "To hibakusha (atomic bomb survivors), I have promised I will visit (Hiroshima and Nagasaki) as long as I am in the U.N. undersecretary general position. So I made the decision on my own." Nakamitsu completed a two-week self-quarantine after entering Japan, a requirement during the novel coronavirus pandemic. She was also expected to attend a memorial peace prayer ceremony for atomic bomb victims in Nagasaki on Aug. 9. In mid-July, The Asahi Shimbun interviewed Nakamitsu online, prior to her departure from the United States to Japan.

<http://www.asahi.com/ajw/articles/13612993>

Hibakusha activist calls on Abe to sign nuke ban treaty

Ryo Sasaki

The Asahi Shimbun, August 8, 2020

A prominent nuclear bomb survivor and anti-nuclear armament activist is renewing her call for Japan and other countries to sign a U.N. nuclear ban treaty on the 75th anniversary of the atomic bombings. Setsuko Thurlow, a hibakusha from Hiroshima, sent letters to the leaders of 197 countries asking

them to ratify and promote the Treaty on the Prohibition of Nuclear Weapons. Thurlow, 88, who lives in Canada, wrote to Prime Minister Shinzo Abe as well. In her letter in English to Abe, she wrote about the resentment and sorrow of hibakusha who hope for the abolishment of nuclear weapons, and shared her personal story about the blast. She was just 13 years old.

“Still to this day, radiation is killing survivors,” she said. “Every person who died had a name. Every person was loved by someone.” She wrote that she feels personally betrayed as one of the hibakusha because the Japanese government is refusing to sign and ratify the treaty and that it continues to rely on the nuclear umbrella of the United States. “The fact that the Japanese government shamefully continues to state publicly that nuclear weapons are necessary for its own security undermines all efforts being made for their elimination,” she said in her letter. “Tragically, the Japanese government seems to be an accomplice to these nuclear-armed nations. This stance represents a dreadful defiance against Japanese public opinion, and has the potential to destroy Japan’s credibility in the international community,” she said. The Treaty on the Prohibition of Nuclear Weapons marked the third anniversary of its adoption at the United Nations on July 7.

<http://www.asahi.com/ajw/articles/13588704>

North Korea

North Korea has 'probably' developed nuclear devices to fit ballistic missiles - U.N. report

Michelle Nichols

Reuters, August 4, 2020

North Korea is pressing on with its nuclear weapons program and several countries believe it has “probably developed miniaturized nuclear devices to fit into the warheads of its ballistic missiles,” according to a confidential U.N. report. The report by an independent panel of experts monitoring U.N. sanctions said the countries, which it did not identify, believed North Korea’s past six nuclear tests had likely helped it develop miniaturized nuclear devices. Pyongyang has not conducted a nuclear test since September 2017. The interim report, seen by Reuters, was submitted to the 15-member U.N. Security Council North Korea sanctions committee on Monday.

“The Democratic People’s Republic of Korea is continuing its nuclear program, including the production of highly enriched uranium and construction of an experimental light water reactor. A Member State assessed that the Democratic People’s Republic of Korea is continuing production of nuclear weapons,” the report said. North Korea is formally known as the Democratic People’s Republic of Korea (DPRK). North Korea’s mission to the United Nations in New York did not immediately respond to a request for comment on the U.N. report. North Korean leader Kim Jong Un said last week there would be no more war as the country’s nuclear weapons guarantee its safety and future despite unabated outside pressure and military threats. The U.N. report said one country, which it did not identify, assessed that North Korea “may seek to further develop miniaturisation in order to allow incorporation of technological improvements such as penetration aid packages or, potentially, to develop multiple warhead systems.”

<https://in.reuters.com/article/northkorea-sanctions-un/north-korea-has-probably-developed-nuclear-devices-to-fit-ballistic-missiles-u-n-report-idINKCN25004N>

North Korea flouts sanctions on nukes, missiles

Edith M. Lederer

AP News, August 5, 2020

U.N. experts say North Korea is flouting U.N. sanctions by expanding its nuclear arsenal and ballistic missile program and by exporting coal and illegally importing refined petroleum products in excess of its annual quota. The experts said in key sections of a report obtained Tuesday by The Associated Press that North Korea has also evaded sanctions through “targeted” cyber attacks against officials of countries on the U.N. Security Council and on members of its expert panel. They did not elaborate or identify which of the 15 council nations were targeted.

In the report to the Security Council, the experts said North Korea has maintained its nuclear facilities and continues to produce fissile material, including highly enriched uranium, that can be used in nuclear weapons. It has also continued “to develop infrastructure and capacity for its ballistic missile program” and moved ahead on construction of an experimental light water reactor, they said. The independent panel quoted several unidentified countries as saying North Korea has “probably” developed miniaturized nuclear weapons that can fit into its ballistic missiles.

<https://apnews.com/cb4071a06069b6c6f028ecad7baf46f9>

NK continues to develop missile capability beyond limits: Pentagon official

Kim So-hyun

Korea Herald, August 7, 2020

North Korea continues to work aggressively to develop long-range nuclear missiles capable of threatening the US mainland through a “very deliberate testing program” for systems improvement, a senior Pentagon official said. “Despite our ongoing diplomatic efforts, North Korea continues to expand its ballistic missile capabilities and conduct test launches despite international restrictions,” Mercado noted that Iran, which possesses well over 1,000 missiles, continues to modernize and proliferate its missile systems as the country “views its missile arsenal as a valuable tool of coercion in the broader Middle East region.” “We have seen concerted Chinese and Russian efforts to intimidate our allies and partners against cooperating with the US on regional missile defense as well as attempts to sow disinformation on US homeland defense,” he said. “The ultimate goal of these efforts by China and Russia is clear -- the increased vulnerability of US, allied and partner nations and their forces to missile attack and more importantly the coercion that accompanies this vulnerability.” Mercado mentioned that the US missile defenses provide several practical benefits, including stronger leverage of its diplomats at the negotiating table, such as talks with North Korea on denuclearization, by demonstrating its ability to counter threats of nuclear attack. He also added that US missile defenses can intercept an unauthorized or accidental missile launch, which can help

decrease the risk of inadvertent escalation, and can protect radars and other systems that provide situational awareness to buy time and reduce the risk of miscalculation during a crisis.

http://www.koreaherald.com/view.php?ud=20200807000514&ACE_SEARCH=1

N.Korea nuclear reactor site threatened by recent flooding, U.S. think-tank says

Josh Smith

Reuters, August 13, 2020

Satellite imagery suggests recent flooding in North Korea may have damaged pump houses connected to the country's main nuclear facility, a U.S.-based think-tank said on Thursday.

Analysts at 38 North, a website that monitors North Korea, said commercial satellite imagery from August 6-11 showed how vulnerable the Yongbyon Nuclear Scientific Research Center's nuclear reactor cooling systems are to extreme weather events. The Korean peninsula has been hammered by one of the longest rainy spells in recent history, with floods and landslides causing damage and deaths in both North and South Korea. Located on the bank of the Kuryong River about 100 km (60 miles) north of North Korea's capital, Pyongyang, Yongbyon is home to nuclear reactors, fuel re-processing plants and uranium enrichment facilities that are thought to be used in the country's nuclear weapons programme.

The five-megawatt reactor - believed to be used to produce weapons-grade plutonium - does not appear to have been operating for some time, and an Experimental Light Water Reactor (ELWR) has not yet come online, but such flooding in the future would likely force a shutdown, the 38 North report said. "Damage to the pumps and piping within the pump houses presents the biggest vulnerability to the reactors," the report said. "If the reactors were operating, for instance, the inability to cool them would require them to be shut down."

While there was further flooding downstream, it did not appear to reach the Yongbyon facility's Uranium Enrichment Plant and by August 11 the waters appear to have somewhat receded, 38 North said. North Korea's state media has not mentioned any damage to Yongbyon, but reported this week that senior leaders had been touring flood-stricken areas, delivering aid and providing guidance on how to prevent the high waters from damaging crops. South Korea's Ministry of Defence declined to comment on the 38 North report, but said it is always monitoring developments related to North Korea's nuclear and missile programmes and maintaining close cooperation with the U.S. government.

<https://in.reuters.com/article/northkorea-nuclear-floods/update-1-n-korea-nuclear-reactor-site-threatened-by-recent-flooding-u-s-think-tank-says-idINL4N2FF17U>

South Korea

South Korea to donate \$10 million for NK aid program

Kang Seung-woo

Korea Times, August 6, 2020

The government has decided to donate \$10 million (11.9 billion won) to North Korea via a World Food Programme (WFP) aid project, under which it will provide essential food and nutrition for hundreds of thousands of young children and women, the Ministry of Unification ministry said Thursday. The ministry made it clear that the provision did not breach international sanctions imposed on the North for its nuclear and missile programs. The decision, made during a meeting of the Inter-Korean Exchange and Cooperation Promotion Council, marked the first humanitarian aid to the North since the inauguration of Unification Minister Lee In-young in July, who is pursuing more projects between the two Koreas. "This decision will serve as a starting point for the government to consistently provide humanitarian aid to the North regardless of the political and military situation," Lee told the council. Last year, the South made a donation of 50,000 metric tons of rice and \$4.5 million in cash to cover 10 million people suffering from hunger in the drought-hit North. This year's money will be used to provide 9,000 tons of fortified food to 143,000 children under the age of 7 and 31,500 pregnant and nursing women in 60 counties in the North (WFP figures), and 3,600 tons of corn, beans and cooking oil, the ministry said. According to a ministry official, the WFP requested the aid earlier this year and relevant discussions began in earnest in March.

"We have reached the conclusion that it is the right time to step up with humanitarian aid," the official said. In response to speculation that the aid may either be diverted to the military or fund the nuclear weapons and missile programs, the official said that the food-assistance branch of the United Nations is well equipped with a monitoring system, having an office in Pyongyang. The aid program comes two months later than initially planned due to escalating tensions on the Korean Peninsula, highlighted by the North's unilateral demolition of the inter-Korean liaison office in its border city of Gaeseong to express its anger at anti-North propaganda leaflets sent by North Korean defectors and activists.

http://www.koreatimes.co.kr/www/nation/2020/08/103_293985.html

South Korean farmers bartering sugar for North Korean booze to bypass sanctions

Hyonhee Shin

Reuters, August 7, 2020

A South Korean farmers' cooperative said it has clinched a 150 million won (\$127,000) deal to barter sugar for North Korean liquor and food products, bypassing sanctions banning cash transfers. The deal, brokered by a Chinese company, was signed in June with five North Korean trading firms, an official for the cooperative said, though it still needs approval from Seoul's Unification Ministry, which oversees inter-Korean affairs. Under the terms, North Korea would swap 240 products - including its signature ginseng and blueberry liquors, crackers, candies, teas and health supplements - for 167 tonnes of sugar from the South, said Oh Hyun-kyung, the cooperative official. "The North wanted sugar as they were having difficulty importing raw materials due to sanctions and the coronavirus pandemic," Oh told Reuters, saying shipments could begin later this month.

<https://in.reuters.com/article/us-northkorea-southkorea/south-korean-farmers-bartering-sugar-for-north-korean-booze-to-bypass-sanctions-idINKCN2521BO>

Defense Ministry plans to build enhanced ballistic missile submarines

Choi Si-young

Korea Herald, August 10, 2020

The Defense Ministry said Monday it plans to roll out enhanced submarines in the next five years that will be capable of carrying more ballistic missiles, as part of a long-term initiative to beef up South Korea's military capabilities. It also plans to develop its own interceptor system like Israel's Iron Dome to defend the country's core infrastructure in the capital area against North Korea's long-range artillery threats. "We have in mind 3,600- and 4,000-ton submarines for development, much more advanced than the ones in operation now," a senior ministry official said, referring to the 3,000-ton Dosan Ahn Changho, the first locally made attack submarines.

The advanced sub and interception system plans are part of the government's defense blueprint for 2021-2025, unveiled Monday, which calls for spending 300.7 trillion won (\$253 billion), a 6.1 percent on-year hike on average over the next five years. As for the submarine development program, the ministry left open the possibility that the new subs could be powered by nuclear energy instead of diesel fuel. "We will discuss that when the right time comes," the senior official said when asked directly. Nuclear-powered submarines are considered more powerful than diesel submarines because they can stay under water unnoticed much longer. They can also travel much faster. Only six countries including the US and Russia are known to possess them. South Korea initially pushed to build its first nuclear submarine in 2003, amid rising military tensions prompted by North Korea's withdrawal in the same year from the non-proliferation treaty that prevents the spread of nuclear weapons-technology.

But Korea had to abort the mission in 2010 as the International Atomic Energy Agency, backed by the US and countries opposing Seoul's plan, took issue with it, out of fear it could spark an arms race in the region. To develop nuclear-powered military assets, Seoul would also have to revise a nuclear pact with Washington, under which Seoul is committed to using only a limited level of enriched uranium for nonmilitary purposes only. The ministry also said it would develop a variety of missiles that could go with its first locally developed fighter jets, the KF-X, which will be commissioned next year. The KF-X project is the largest undertaking ever by the South Korean military, with some \$15 billion earmarked for it and with the end product set to be delivered to the Air Force in 2026.

http://www.koreaherald.com/view.php?ud=20200810000758&ACE_SEARCH=1

S. Korea to develop indigenous Iron Dome-like interceptor system against NK long-range

Yonhap

Korea Herald, August 10, 2020

South Korea will begin developing its own interceptor system like Israel's Iron Dome in the next five years to defend the country's core infrastructure in the capital area against North Korea's long-range

artillery threats, the defense ministry said. Unveiling its defense blueprint for 2021-2025, the ministry also said it will officially begin procedures to acquire a light aircraft carrier next year and start the production of a homegrown fighter jet which is currently under development. "When we talk about South Korea's missile defense system, it usually refers to one targeting North Korea's Scud-type or stronger missiles, whereas this new interceptor system will focus on protecting the capital area against the North's long-range artillery such as its 240-mm or 300-mm multiple rocket launchers," a ministry official said. The actual deployment of the Korean version of Israel's Iron Dome air defense system is expected to be put into force in the late 2020s or early 2030s, officials said. South Korea will also begin developing long-range air-to-surface and air-to-ship guided missiles to be loaded on the indigenous fighter jets. When the production of the fighter jet is complete, South Korea will become the 13th country in the world to own a homegrown combat plane, the ministry said. South Korea launched the 8.8 trillion-won KF-X project in 2016 to develop the homegrown fighter by 2026 to replace the country's aging fleet of F-4 and F-5 aircraft. Last week, the arms procurement agency said it has produced a prototype of an advanced radar system, a key part of the envisioned jet. For the Navy, the ministry said the country will begin building 3,600-ton and 4,000-ton submarines during the period.

http://www.koreaherald.com/view.php?ud=20200810000502&ACE_SEARCH=1

South Korea, U.S. to hold smaller military drills due to coronavirus

Hyonhee Shin

Reuters, August 12, 2020

South Korea and the United States will kick off their annual joint military drills this week but without mobilising U.S.-based troops after scaling back the programme due to coronavirus concerns, a military source in Seoul said on Wednesday. The allies have been discussing how to adjust the exercises, which usually begin in August, with the coronavirus threatening to disrupt the travel of U.S. personnel.

The programme involves tens of thousands of soldiers from both sides, though it is largely focused on computerised simulations rather than live field training. The exercises will be held from Aug. 16-28 but in a reduced scale, though the timeframe was extended by a couple of days to disperse participants and minimise night activities, the military source said, adding that a formal announcement would soon be made. Seoul's defence ministry spokesman said the plans have not yet been finalised. Jacqueline Leeker, a spokeswoman for U.S. Forces Korea (USFK), said regular training is aimed at maintaining "trust, proficiency and readiness" but did not provide details.

<https://in.reuters.com/article/southkorea-usa-military/south-korea-u-s-to-hold-smaller-military-drills-due-to-coronavirus-idINKCN25806P>

Misc

What is ammonium nitrate and why is it dangerous?

Reuters, August 5, 2020

A massive warehouse explosion in Beirut killed at least 100 people and injured nearly 4,000. Lebanese President Michel Aoun said 2,750 tonnes of ammonium nitrate had been stored for six years at the port without safety measures. Ammonium nitrate is an industrial chemical commonly used in fertilisers and as an explosive for quarrying and mining. It is an oxidiser considered relatively safe if uncontaminated and stored properly. But it is extremely dangerous if contaminated, mixed with fuel or stored unsafely. A large quantity of ammonium nitrate exposed to intense heat can trigger an explosion. Storing the chemical near large fuel tanks, in bulk in large quantities and in a poorly-ventilated facility could cause a massive blast. The larger the quantity, the more risk it will detonate. "On a scale, this explosion is scaled down from a nuclear bomb rather than up from a conventional bomb," said Roland Alford, managing director of Alford Technologies, a British company that specialises in disposal of explosive ordnance. "This is probably up there among the biggest non-nuclear explosions of all time." Experts have noted the colour of the smoke and "mushroom cloud" seen in footage of Tuesday's blast as characteristic of ammonium nitrate explosions.

<https://in.reuters.com/article/lebanon-security-blast-explosive-factbox/factbox-what-is-ammonium-nitrate-and-why-is-it-dangerous-idINKCN25126Z>

Hiroshima Day: Imagining a South Asian nuclear apocalypse triggered by India and Pakistan

Praveen Swami

Firstpost, August 6, 2020

"The time has come again for India's Bheema to tear open the breasts of these infidels," an editorial declaimed, as war raged on the Kargil heights "and purify the soiled tresses of Draupadi with blood. Pakistan will not listen just like that. We have a centuries-old debt to settle with this mindset. It is the same demon that has been throwing a challenge at Durga since the time of Mohammad Bin Qasim. Arise Atal Bihari! Who knows if fate has destined you to be the author of the final chapter of this long story? For what have we manufactured bombs? For what have we exercised the nuclear option?" A little over two years later, jihadists fought their way into India's Parliament, seeking to annihilate the country's political leadership. As then-prime minister Atal Bihari Vajpayee ordered what would turn into the largest mobilisation of military forces since the Second World War, it's likely he had the exhortation delivered by the Rashtriya Swayamsevak Sangh's journal, Panchjanya, on his mind.

In the event, Vajpayee held back from war. So too did former prime minister Manmohan Singh after 26 November, 2008. Prime Minister Narendra Modi struck across the Line of Control in 2019— but, his message sent, did not escalate further when Pakistan Air Force jets struck back across the Line of Control, targeting an Indian Army base in Rajouri. Today, as the world marks Hiroshima Day, Indians and Pakistanis inhabit countries where public discourse around nuclear weapons — and war — has become ever more casual. For the public, it's important to know the story of what would have happened if those prime ministers had chosen otherwise.

<https://www.firstpost.com/india/hiroshima-day-imagining-a-south-asian-nuclear-apocalypse-triggered-by-india-and-pakistan-8677381.html>

Nuclear Power Plant Equipment Market Highlighting Regional Revenue Share Dominance During 2020-2024

Bulletin Line, August 7, 2020

The report on the Nuclear Power Plant Equipment market provides a bird's eye view of the current proceeding within the Nuclear Power Plant Equipment market. Further, the report also takes into account the impact of the novel COVID-19 pandemic on the Nuclear Power Plant Equipment market and offers a clear assessment of the projected market fluctuations during the forecast period. The different factors that are likely to impact the overall dynamics of the Nuclear Power Plant Equipment market over the forecast period (2020-2026) including the current trends, growth opportunities, restraining factors, and more are discussed in detail in the market study.

Nuclear Power Plant Equipment Market report provides in-depth review of the Expansion Drivers, Potential Challenges, Distinctive Trends, and Opportunities for market participants equip readers to totally comprehend the landscape of the Nuclear Power Plant Equipment market. Major prime key manufactures enclosed within the report alongside Market Share, Stock Determinations and Figures, Contact information, Sales, Capacity, Production, Price, Cost, Revenue and Business Profiles are (Shanghai Electric (China), Mitsubishi Heavy Industries (Japan), Larsen and Toubro Industries (India), Babcock and Wilcox (USA), Dongfang Electric (China), Hitachi-GE Nuclear Energy (Japan), Alstom SA (France), Areva SA (France)). The main objective of the Nuclear Power Plant Equipment industry report is to Supply Key Insights on Competition Positioning, Current Trends, Market Potential, Growth Rates, and Alternative Relevant Statistics.

<https://bulletinline.com/2020/08/07/nuclear-power-plant-equipment-market-highlighting-regional-revenue-share-dominance-during-2020-2024/>

Belarus begins fuel loading at new Astravets nuclear plant

Reuters, August 7, 2020

Belarus began loading fuel into the first of two reactors at its new Russian-built Astravets nuclear power plant on Friday and said it expects to begin using the plant in the fourth quarter. Built by Russian state firm Rosatom and financed by Moscow with a \$10 billion loan, the project is opposed by neighbouring Lithuania, whose capital Vilnius is just 50km away.

Vilnius has banned all electricity imports from the plant, citing concerns about safety and national security, and along with Estonia and Latvia is considering slapping a fee on power imports from Russia, as well. Lithuania, Latvia and Estonia are moving towards a full decoupling from their Soviet-era common power system by 2025.

<https://in.reuters.com/article/us-belarus-power/belarus-begins-fuel-loading-at-new-astravets-nuclear-plant-idINKCN2531FB>

Uzbek, Hungarian ministers discuss cooperation in nuclear energy

World Nuclear News, August 12, 2020

According to a statement published by the Uzbek ministry today, Hungary's Minister of Foreign Affairs and Foreign Trade Péter Szijjártó expressed interest in cooperation between UzAtom and the Academy of Sciences of the Republic of Uzbekistan, and the Hungarian Scientific Centre for Nuclear Energy and MVM Paksi Atomeromu Ltd in the construction of a nuclear power plant and in scientific exchange in the field of nuclear energy. They also discussed a proposal for 100 Uzbek students to take a course in nuclear energy at Budapest University of Technology and Economics. Officials from UzAtom - a government agency created in 2018 to manage Uzbekistan's nuclear power programme - and a number of other ministries and departments visited Hungary in 2018 and this year to become acquainted with its nuclear energy facilities. They learned about Hungary's project to expand its Paks nuclear power plant with two Russian VVER-1200 units.

In May, Uzbekistan's Ministry of Energy published a detailed 'Concept Note' outlining its strategy on electrical generation to the year 2030. The document anticipates a sharp reduction in the country's reliance on gas-fired power generation from the current 83% to 50%, and sets goals for new nuclear, solar and wind power production of 15%, 8% and 7%, respectively. Uzbekistan and Russia signed an intergovernmental agreement on cooperation in the use of nuclear energy for peaceful purposes in December 2017, and in September 2018 a further agreement was signed for the construction by Russian state nuclear corporation Rosatom of two VVER-1200 reactors. These are to be commissioned in 2028 and 2030, respectively. Alisher Sultanov, Uzbekistan's energy minister, later announced the country wants to build four units and not just two as previously stated.

<https://www.world-nuclear-news.org/Articles/Uzbek-Hungarian-ministers-discuss-cooperation-in-n>

Oil major Chevron invests in nuclear fusion startup Zap Energy

Reuters, August 13, 2020

Oil major Chevron Corp (CVX.N) said on Wednesday it is investing in Zap Energy Inc, joining Italy's ENI (ENI.MI) and Norwegian state oil company Equinor (EQNR.OL) who have also backed nuclear fusion startups to reduce their carbon footprint. Chevron's decision comes as energy companies face increasing pressure from investors to reduce emissions, spend more on low-carbon energy and disclose the impact of their fossil fuel production on climate change.

"Chevron Technology Ventures' investment in fusion is an opportunity to enhance the company's focus on a diverse portfolio of low-carbon energy resources," Chevron said in a statement, without putting a number on the size of its investment. Nuclear fusion is a process that releases large amounts of energy with no greenhouse gas emissions and limited long-lived radioactive waste. Zap Energy raised \$6.5 million from its Series A financing on July 12, according to data from Crunchbase.

<https://in.reuters.com/article/us-chevron-investment-nuclear/oil-major-chevron-invests-in-nuclear-fusion-startup-zap-energy-idINKCN25831E>

A New Nuclear Arms Race: It's Not Too Late

Jack Segal

Northern Express, August 15, 2020

The memory of the atomic bombings of Hiroshima and Nagasaki 75 years ago is fading as the last survivors die off. The global anti-nuclear movement of the 1960s, '70s, and '80s that used to bring massive crowds into the streets is long forgotten. Most people today do not even give a thought to the existential threat that nuclear weapons pose. But our lives rely on a hair-trigger nuclear-command system and on the hope that our leaders have the wisdom to ensure that an accidental or impulsive decision never occurs. With each passing year, the potential for nuclear war increases. India-Pakistan, Israel-Iran, India-China. Nuclear-armed states are developing new, more powerful weapons but have neglected to develop confidence-building measures and a level of cooperation that has, until now, helped prevent conflicts from becoming nuclear war.

Indeed, both the U.S. and Russia seemingly have chosen to undermine the framework of stability developed since the 1960s. President-elect Donald Trump tweeted in December 2016 that the United States “must greatly strengthen and expand its nuclear capability” and that we should “outmatch” and “outlast” other potential competitors in a nuclear arms race. That vision of nuclear superiority didn't start with President Trump. The across-the-board trillion-dollar modernization of our nuclear weapons systems began under President Obama. President Trump's top arms control negotiator, Marshall Billingsley, described the administration's approach. “We know how to win these [arms] races, and we know how to spend the adversary into oblivion ... If we have to, we will, but we sure would like to avoid it.” That last remark sounds like an open invitation to negotiate with our adversaries. But President Trump's skepticism about the value of arms-control agreements has so far led elsewhere. The administration has systematically dismantled decades of arms-control agreements: The Anti-Ballistic Missile (ABM) Treaty and the Intermediate-Range Nuclear Forces (INF) Treaty have been terminated, the president intends to withdraw from the Open Skies Treaty in November, and now the New Strategic Arms Reduction Treaty, aka New START, is on life support.

<https://www.northernexpress.com/news/opinion/a-new-nuclear-arms-race-its-not-too-late/>

Mystery of the dimming of massive star Betelgeuse explained

Will Dunham

Reuters, August 15, 2020

Astronomers have determined the cause of the dramatic dimming observed last year and earlier this year of one of the brightest stars in the night sky, a colossus called Betelgeuse that appears to be on its way toward a violent death. Based on Hubble Space Telescope observations, scientists said they believe Betelgeuse ejected a huge hot, dense cloud of material into space that cooled to form dust, shielding the star's light and making it appear dimmer from the perspective of viewers on Earth. Betelgeuse is classified as a red supergiant, the largest type of star. It is more than 10 times the mass

of our sun. If it resided at the center of our solar system, its surface would extend to the planet Jupiter.

Scientists suspect Betelgeuse - pronounced “beetle juice” - is nearing the end of its life cycle when it will use up its nuclear fuel and explode, relatively soon in cosmic terms, in an event known as a supernova. “Frankly, we don’t know for sure how soon Betelgeuse will go supernova,” astrophysicist Andrea Dupree, director of the Solar Stellar Planetary Sciences Division at the Harvard-Smithsonian Center for Astrophysics and leader of the research published this week in the *Astrophysical Journal*, said. “It is likely not in our lifetimes. But, we do not know how a star behaves the week before, the night before it explodes,” Dupree added. In a supernova, huge stars like Betelgeuse expel large amounts of heavy elements, including carbon, oxygen, calcium and iron, into space that become building blocks of new generations of stars. Betelgeuse is located relatively near our solar system, about 725 light-years away. A light year is the distance light travels in a year, 5.9 trillion miles (9.5 trillion km). Its dimming began last October and by mid-February had lost more than two-thirds of its brilliance. It returned to its usual brilliance by April but may be dimming again, which researchers are working to confirm.

<https://in.reuters.com/article/uk-space-exploration-betelgeuse/mystery-of-the-dimming-of-massive-star-betelgeuse-explained-idINKCN25A2PX>

Op-Ed India

Taking nuclear vulnerabilities seriously

M.V. Ramana and Benoît Pelopidas

The Hindu, August 6, 2020

All nuclear weapon states have admitted to the possibility that deterrence could fail. Seventy-five years ago, the Japanese city of Hiroshima was destroyed by one single atomic bomb. Three days later, a second bomb destroyed Nagasaki.

<https://www.thehindu.com/opinion/op-ed/taking-nuclear-vulnerabilities-seriously/article32279584.ece>

Vikram Sarabhai birth anniversary: Remembering Father of the Indian Space Program and ISRO’s founder on his 101st birthday

Zarafshan Shiraz

Hindustan Times, August 12, 2020

Making India believe that the sky’s the limit, Vikram Sarabhai is not only credited for putting the first Indian satellite, Aryabhata, in orbit in 1975 from a Russian cosmodrome but also for establishing the Indian Space Research Organisation. His pioneering contributions towards the establishment and development of India’s nuclear power plants for defence purposes, apart from taking education to

remote villages through satellite communication, landed him with two of India's highest honours - the Padma Bhushan in 1966 and the Padma Vibhushan which was awarded posthumously in 1972.

On his 101st birth anniversary today, Skyroot Aerospace announced the successful test firing of their Vikram-1 Launch vehicle. Taking to their Twitter handle, the Spacetech startup shared the test firing of an upper stage rocket engine. It tweeted, "No better day than Dr. Vikram Sarabhai's birthday to announce our successful test firing of our Vikram-1 Launch vehicle's upper stage Engine-Raman. Four Raman engines with multi-start capability produce a thrust of 3.4kN and inserts multiple satellites into orbit (sic)."

<https://www.hindustantimes.com/more-lifestyle/vikram-sarabhai-birth-anniversary-remembering-father-of-the-indian-space-program-and-isro-s-founder-on-his-101st-birthday/story-vLVW2xaX8pbK5Z82ljXOrO.html>

USA

"The end of arms control as we know it"

Alex Ward,

VOX, August 3, 2020

The US and Russia were then barely over a year away from losing the last major arms control agreement between them: New START, short for the Strategic Arms Reduction Treaty. That agreement limits the size of the two countries' nuclear arsenals, which together account for 93 percent of all nuclear warheads on earth. The deal expires on February 5, 2021, and those sitting around the table feared its demise. The trepidation inspired the group's four co-chairs to do something the Dartmouth Conference hadn't done in its 60-year existence: release a statement.

"Given the deep concerns we share about the security of our peoples, for the first time in our history we are compelled by the urgency of the situation to issue this public appeal to our governments," they wrote, calling for the US and Russia to invoke the treaty's five-year extension. Today, roughly half a year before New START stops, the group's members continue to stress the consequences. "We're at a decisive point," said retired US Army Brig. Gen. Peter Zwack, who was at the December meetings. "The entire arms control regime of the past 50 years is about to pass."

<https://www.vox.com/world/21131449/trump-putin-nuclear-usa-russia-arms-control-new-start>

It's Time to Rethink Our Russia Policy

Rose Gottemoeller, Thomas Graham, Fiona Hill, Jon Huntsman Jr., Robert Legvold and Thomas R. Pickering

Politico, August 5, 2020

U.S.-Russia relations are at a dangerous dead end that threatens the U.S. national interest. The risk of a military confrontation that could go nuclear is again real. We are drifting toward a fraught nuclear arms race, with our foreign-policy arsenal reduced mainly to reactions, sanctions, public shaming and

congressional resolutions. The global Covid-19 pandemic and the resulting serious worldwide economic decline, rather than fostering cooperation, have only reinforced the current downward trajectory. Meanwhile, the great challenges to peace and our well-being that demand U.S.-Russia cooperation, including the existential threats of nuclear war and climate change, go unattended. Because the stakes are so high, both in the dangers they entail and the costs they contain, we believe that a careful, dispassionate analysis and change of our current course are imperative.

We go into this open-eyed. Russia complicates, even thwarts, our actions, especially along its extended periphery in Europe and Asia. It has seized territory in Ukraine and Georgia. It challenges our role as a global leader and the world order we helped build. It interferes in our domestic politics to exacerbate divisions and tarnish our democratic reputation. At best, our relations will remain a mix of competition and cooperation. The policy challenge will be to strike the most beneficial and safest balance between the two. To this end, we offer six broad prescriptions for U.S. policy.

<https://www.politico.com/news/magazine/2020/08/05/open-letter-russia-policy-391434>

The World Can Still Be Destroyed in a Flash

The New York Times, August 6, 2020

The nuclear weapons dropped over Hiroshima and Nagasaki 75 years ago this week wreaked a devastation never before seen in human warfare. Yet they were firecrackers compared with the nuclear weapons that were soon developed — bombs, warheads, shells, torpedoes and other devices capable of vaporizing the human race in an apocalyptic flash. For decades, that thought cast a pall of acute anxiety over America and the world. Whether because of that fear, a strategy of effective deterrence, chance or all the above, the United States remains the only country to have used nuclear weapons in combat. With the end of the Cold War, anxiety around nuclear war has receded. Most people probably are not aware that a harrowing and expensive new arms race is now underway.

Today Americans are more likely to identify climate change as the greatest man-made threat to the planet. Last year, in the list of what Americans fear compiled annually by Chapman University, “North Korea using nuclear weapons” and “Nuclear weapons attack” ranked 27 and 29, far below “Corrupt government officials” (No. 1) or “Pollution of oceans, rivers and lakes” (No. 2). Yet even with the Cold War long over and stockpiles of nuclear weapons in the Russian and American arsenals sharply reduced through a series of nuclear arms treaties, to fewer than 6,000 warheads each, there are no grounds for complacency. The world can still be destroyed in a flash.

<https://www.nytimes.com/2020/08/06/opinion/hiroshima-anniversary-nuclear-weapons.html>

Donald Trump and Nuclear Weapons: A Perilous “Fusion” For Israel

Prof. Louis René Beres

Modern Diplomacy, August 11, 2020

It stands to reason that any combination of Donald Trump and nuclear weapons is dangerous to the United States. After all, this presidency has become unambiguously unhinged – one could now reasonably say “deranged” – and there is corresponding evidence of nuclear apprehensions in high

places. This urgent assessment now includes some of the country's senior military commanders. Not generally discussed, however, are the indirect security perils posed by this American president to various US allies. In this connection, which could at some point concern an authentic existential threat, Israel comes immediately to mind. This particular expectation is not on account of any reciprocal shortcomings in that country's nuclear forces and/or decision-making processes (presumptive forces that remain "deliberately ambiguous"), but "simply" as a valid expression of ongoing strategic interdependence.

No state exists alone in the world. No individual state's military decisions can gainfully disregard the fundamentally systemic nature of world politics. These politics always constitute a system. It follows that when a particular element is strengthened or degraded within components of that system, the ramifications will be felt far and wide. For Israel, a country smaller than America's Lake Michigan, this relationship would become most serious (perhaps even of existential import) when that specific element has its origins in United States nuclear decision-making. One might also affirm about any such scenario, incontestably, that the US-Israel relationship could even go beyond "most serious" to "extremely urgent" whenever the superpower party was already embroiled in an atomic crisis; that is, in extremis atomicum.

<https://moderndiplomacy.eu/2020/08/11/donald-trump-and-nuclear-weapons-a-perilous-fusion-for-israel/>

Russia

Multilateral arms control system to replace New START, Russian expert says

TASS News Agency, August 5, 2020

The Strategic Arms Reduction Treaty (New START) won't be extended and a new multilateral arms control system needs to be established in its place, Deputy Director of the Institute for US and Canadian Studies at the Russian Academy of Sciences Pavel Zolotarev said during an online conference dubbed US Nuclear Ambitions: from Truman to Trump. According to the expert, although Washington seeks to play the Russian threat card, it is China that US views as its opponent and rival. "China causes them concern because according to their estimates, China's stocks of weapons-grade nuclear materials, particularly weapons-grade plutonium and highly enriched uranium, makes it possible for Beijing to double its nuclear potential," Zolotarev noted.

In his view, Washington continues to work with Russia on arms control issues not because it wants to maintain the current system but because it wants to take advantage of Russia's influence to engage China in discussions. "It is pointless to talk about involving China in the nuclear arms reduction process. It is more reasonable to raise the possibility of engaging all nuclear countries. When signing New START, Russia emphasized the need for a multilateral conversation, at least with the members of the Nuclear Five," the expert stressed.

<https://tass.com/defense/1186041>

Experts: Terminating New START Treaty could mean global nuclear disaster

TASS News Agency, August 7, 2020

Terminating the New START Treaty (Strategic Arms Reduction Treaty) could enable the United States to build up strategic weapons uncontrollably and bring global security to the brink of disaster, Head of the Main Operational Directorate of the Russian Armed Forces' General Staff, Major General Andrey Sterlin and a leading researcher at the Center for Military Strategic Research of the General Staff's Military Academy Alexander Khryapin wrote in an article for Krasnaya Zvezda. The experts emphasized that the Treaty, which expires on February 5, 2021, is the last agreement in force in the international security and arms control system, but the United States announced their refusal to extend it.

"If the New START Treaty is terminated, the military-political situation will become significantly more complicated, since, in the absence of restrictive treaty norms, the United States may uncontrollably build up its strategic arms. We emphasize that this is an extremely dangerous path, because once again, like in the second half the 20th century, peace will balance on the brink of a global nuclear catastrophe," the article said. According to the article, the fate of the Treaty on the Non-Proliferation of Nuclear Weapons and the Comprehensive Nuclear-Test-Ban Treaty (CTBT) will remain a big question. "Terminating the Treaty on the Non-Proliferation of Nuclear Weapons may become the trigger that would lead to a nuclear arms race around the world and an increase in the number of countries possessing nuclear weapons," the experts wrote.

<https://tass.com/defense/1186717>

Remembering the Kursk nuclear-powered submarine disaster

TASS News Agency, August 12, 2020

The Kursk was a nuclear-powered missile-carrying submarine of project 949A Antei, which the Central Design Bureau for Marine Engineering Rubin in Leningrad (currently St. Petersburg) developed at the end of the 1970s - early 1980s. The 154-meter long and 18.2-meter wide submarine had a full displacement of 24,000 tonnes and was equipped with a 98,000-horsepower nuclear power plant. The Kursk carried 12 twin missile launchers P-700 Granit (24 missiles in all) and six 650 mm and 533 mm torpedo tubes (28 torpedoes). A total of eleven Antei submarines were built in 1982-1996. According to open sources, five remain in service and two are undergoing overhaul and upgrade.

The keel-laying ceremony for The Kursk took place at the Northern Machine-Building Enterprise (currently JSC PO Sevmash in Severodvinsk, the Arkhangelsk Region) on March 22, 1990. On April 6, 1993 it was named The Kursk in honor of the Red Army's victory in the Battle of Kursk. The submarine was launched in May 1994 and went operational on December 30, 1994. On March 1, 1995 The Kursk was put on the list of ships of Russia's Northern Fleet and became part of the 7th division of the 1st submarine flotilla (based in Vidyayevovo, the Murmansk Region).

<https://tass.com/society/1188845>

West Asia Iran

Why E3 keeps silent on UN arms embargo on Iran

Tehran Times, August 2, 2020

While the dispute over the UN arms embargo on Iran looms large on the horizon, the European signatories to the Iran nuclear deal –France, Germany and the UK (E3) – continue to refuse to take a clear stance on the UN arms embargo, which put them in a dilemma that they want to avoid, an analyst tells the Tehran Times. The E3 and the U.S. increasingly hold talks on Iran in a bid to settle their differences over a range of issues that have shaken the transatlantic alliance over the past few years. The UN arms embargo on Iran is one of these issues on which U.S. officials seek to reach an agreement with the Europeans. The Guardian newspaper confirmed that Hook “was in London on Wednesday to meet Foreign Office officials as part of his attempt to drum up support for the U.S. policy of extending the arms embargo,” suggesting that the Europeans have offered a compromise to extend the EU arms embargo on Iran. “Hook ruled out an EU offer to extend its own arms embargo as sufficient since the EU embargo would still allow Iran to purchase arms outside the EU and the U.S. The E3’s arms embargo does not expire until 2023,” the newspaper said. It also quoted Hook as saying, “It’s great that Europe has these sanctions in place, but what we need is a global embargo, and if you do not have a global embargo it allows Iran to purchase these weapons.” Hook’s visit to London made it clear that the Europeans are making consultations with the U.S. officials before taking stance on the UN arms embargo. They also seem to be holding talks among themselves to decide how to proceed with the 2015 Iran nuclear deal and the UN arms embargo.

Two days before hook’s visit, UK Foreign Minister Dominic Raab held a telephone conversation with his French counterpart Jean-Yves Le Drian on Iran. “The UK and France continue to work together to support global stability and security. Good discussions with French FM Jean-Yves Le Drian today in issues of shared importance, including Iran and joint efforts to deter annexation and to facilitate dialogue between the parties to the MEPP,” tweeted Raab on July 27. The European parties to the Iran nuclear deal have increased their contacts to address what they call “major implications” of the planned lifting of the UN arms embargo. They are yet to take a clear stance on the UN arms embargo, but they have implied on many occasions that they share some concerns with the U.S. over the arms embargo issue.

"The E3 remains committed to fully implementing Resolution 2231 by which the JCPOA was endorsed in 2015. However, we believe that the planned lifting of the UN conventional arms embargo established by resolution 2231 next October would have major implications for regional security and stability," the foreign ministers of France, Germany, and the UK said in a joint statement on June 19, shortly after the International Atomic Energy Agency (IAEA) Board of Governors adopted an anti-Iran resolution on the same day. With respect to the UN arms embargo and the

JCPOA, some analysts believe that the European signatories to the Iran nuclear deal are facing unfavorable options.

<https://www.tehrantimes.com/news/450790/Why-E3-keeps-silent-on-UN-arms-embargo-on-Iran>

Iranians' will has defeated U.S. maximum pressure, senior official says

Tehran Times, August 2, 2020

Presidential chief of staff Mahmoud Vaezi has said that the Iranian people's determination has defeated the United States' policy of "maximum pressure". "Tightening sanctions cannot impede Iran's scientific and defense progress. These advances will continue by the scientists and youths' endeavor. The policy of maximum pressure has failed against the Iranian people's determination and its continuation along with other wrong policies of Trump will lead to his defeat in presidential elections," he wrote in a tweet in Persian. In a tweet in June, Vaezi said that the Donald Trump administration has no way but revising wrong policies and making up for past mistakes, especially economic and medical terrorism against Iran. Vaezi, a former deputy foreign minister, predicted that Trump will lose the November election if he insists on his wrong policies.

"Continuation of practicing discriminatory policy and pushing knee on neck and tightening unilateral sanctions and health and economic terrorism against the Iranian people will not end in Trump's victory in elections, and will just make this administration more isolated. The United States has no way but revising wrong policies and making up for the past," Vaezi tweeted. U.S. Democratic Rep. Adam Schiff said in May that Donald Trump administration's policy of maximum pressure against Iran is a "failed policy". "No amount of spin can save this disastrously failed policy," he said in a tweet. Many analysts and think tanks believe that the maximum pressure policy has failed.

<https://www.tehrantimes.com/news/450803/Iranians-will-has-defeated-U-S-maximum-pressure-senior-official>

U.S. would face major defeat at UN

Saeed Kh. Mavadat

Tehran Times, August 11, 2020

As the U.S. prepares to turn up the heat on Iran at the UN Security Council, a "major defeat" for the U.S. administration's foreign policy looms large on the horizon, a university professor told the Tehran Times. U.S. Secretary of State Mike Pompeo announced last week that the U.S. was going to call for a vote on extending a UN arms embargo on Iran at the Security Council. "The United States will put forward a resolution in the Security Council to extend the arms embargo on Iran," the U.S. chief diplomat said, adding, "The proposal we put forward is eminently reasonable. One way or another we will do the right thing. We will ensure that the arms embargo is extended."

Regardless of the legal arguments regarding the snapback mechanism, the United States could resort to triggering the snapback of UN sanctions even though its legal stance is ambiguous. Whether other countries will implement the arms embargo if it is extended remains an open question. Izadi believes

that any U.S. move to trigger a return of UN sanctions on Iran, would divide the world into two blocs: some countries would be obliged to follow the U.S. and others could ignore the U.S. pressure. “We know that the United States doesn’t follow international law and they use different instruments that they have to engage in illegal activities. So the end result is going to be some countries follow the U.S. dictates because they have no other choice, and some countries are going to be more independent and able to withstand the U.S. pressure,” the professor told the Tehran Times.

<https://www.tehrantimes.com/news/451134/U-S-would-face-major-defeat-at-UN>

Israel

Can Israel Bomb Arab World’s First Nuclear Plant In The UAE?

Eurasian Times, August 3, 2020

Israel has been actively involved in maintaining its regional nuclear superiority with two key strategies: developing nuclear and other weapons of mass destruction and simultaneously denying its enemies any opportunity to develop one. This has shifted the balance of power in the Middle East almost completely towards Israel. Recently, as reported by EurAsian Times, a fire broke out at the Natanz nuclear facility in Iran last month. Iran claims it was a cyberattack organised by Israel or the US who have pledged to wipe out the Iranian nuclear program and eliminate all potential threats emanating from the Islamic nation.

The first clandestine operation by Israel against its neighbours’ strategic nuclear assets can be traced back to the late 1970s when Israeli notorious spy agency – Mossad tried to sabotage the manufacturing of centrifuges in France – which were to be delivered to Iraq after an agreement was signed between two governments in 1974. France agreed to build two nuclear reactors in Iraq, which had to be used for peaceful purposes. However, several intelligence inputs indicated Iraq’s dangerous ambitions: building a hot cell laboratory to separate plutonium from radioactive rods and subsequent production of military-grade nuclear fuel.

<https://eurasianimes.com/after-iraq-syria-can-israel-bomb-arab-worlds-first-nuclear-plant-in-the-uae/>

UAE

Viewpoint: A historic moment for the UAE

World Nuclear News, August 10, 2020

"2020 is certainly a pivotal year for the UAE Peaceful Nuclear Energy Programme. The United Arab Emirates has become the first country in the Arab World to successfully develop the intellectual and physical infrastructure necessary for the use of nuclear energy to generate safe, clean and reliable baseload electricity. The Barakah Nuclear Energy Plant, the cornerstone of the UAE programme is an important national infrastructure project, and integral to the UAE's energy strategy to diversify its

portfolio of cleaner energy sources. When fully operational, this civilian nuclear energy plant will produce up to 25% of the UAE's electricity needs, whilst preventing the release of 21 million tonnes of carbon emissions annually, equivalent to removing 3.2 million cars off the roads each year.

This month we have achieved our most historic and significant programme milestone to date - the start-up of the first of the four units of the Barakah plant, the first achievement of its kind in the UAE and the Arab World, and a landmark moment in the UAE's transition to a clean energy future. The achievement marks the first time that the unit 1 reactor produces heat by safely maintaining nuclear fission. This significant milestone follows the completion of fuel assembly loading in March by our joint venture operating and maintenance subsidiary Nawah Energy Company (Nawah). This important step was completed following Nawah's receipt of an operating licence for unit 1 from the UAE's independent nuclear regulator, the Federal Authority for Nuclear Regulation (FANR), in February.

<https://www.world-nuclear-news.org/Articles/An-historic-moment-for-the-UAE>

East Asia

Japan

Thinking about reducing danger of nuclear war amid a pandemic

Roy K. Akagawa

August 1, 2020

The global threat posed by the novel coronavirus pandemic offers a renewed opportunity to assess ways to accelerate the push for nuclear disarmament, according to panelists in an international symposium held on Aug. 1. This year's International Symposium for Peace, "The Road to Nuclear Weapons Abolition: Steps Ahead in Global Danger," had the specific theme of "100 Seconds to Midnight," a reference to the Doomsday Clock, which this moved to the closest it has ever been to mankind's annihilation since it was established in 1947.

Jointly sponsored by the Nagasaki city government, the Nagasaki Foundation for the Promotion of Peace and The Asahi Shimbun, the symposium was held at the Nagasaki Atomic Bomb Museum Hall.

No audience was in attendance as a precaution against the spread of the new coronavirus. The pandemic struck in the year marking the 75th anniversary of the atomic bombings of Hiroshima and Nagasaki in 1945. William J. Perry, the former U.S. defense secretary who gave the keynote speech, and Rachel Bronson, the CEO of the Bulletin of the Atomic Scientists that manages the Doomsday Clock, had both initially planned to visit Nagasaki and Hiroshima to take part in memorial events. However, the pandemic forced them to abandon plans to visit Japan and to take part in the symposium through a videoconferencing system.

In his address, Perry said: “Today we still face the danger of a nuclear conflict. Our real danger is from an accident, such as responding to a false alarm, or a political miscalculation. Neither is likely, but both have happened; and when they did, we avoided a nuclear catastrophe by intelligent people making intelligent decisions; but also by good luck. The survival of our civilization should not depend on our continuing to have good luck.”

He explained that his work toward abolishing nuclear weapons reached its peak in April 2010 with the agreement by the United States and Russia to a New Strategic Arms Reduction Treaty (START), but that developments thereafter left him pessimistic about achieving the goal in his lifetime. Perry has set up a nonprofit organization with the primary goal “to educate the public on the nuclear danger and propose specific actions we can take to reduce those dangers.”

<http://www.asahi.com/ajw/articles/13597846>

Nuclear deterrence has only raised risk of catastrophe

The Asahi Shimbun, August 5, 2020

Hiroshima will observe the 75th anniversary of the 1945 atomic bombing of the city on Aug. 6. Detonated by the United States, the bomb and its unprecedented destructiveness marked the beginning of the atomic age. One symbol that serves as a yardstick of the terror brought by this age is the Doomsday Clock. The Bulletin of the Atomic Scientists sets this clock by using “midnight” as the time for a hypothetical global nuclear catastrophe. The U.S.-based Bulletin has been announcing the time every January since 1947, two years after the atomic bombings of Hiroshima and Nagasaki. In January this year, the clock showed “100 seconds to midnight”--the closest ever to the catastrophe.

Amid the growing precariousness of the global structures for nuclear nonproliferation and disarmament, arms expansion is accelerating and increasingly involving cyber and space warfare. With the United States and China now in their “new Cold War” state, some analysts say an era of a superpower arms race has returned. Three-quarters of century after the bombings of Hiroshima and Nagasaki, we have even started hearing the expression “nuclear restoration.” How should the world, including Japan, deal with this reality? Now is exactly the time to fundamentally re-examine the concept of security based on nuclear deterrence.

Although military capabilities do play a role in dealing with conflicts, there are limits to securing “safety” entirely through military means. The world needs to see all sorts of risks to human life in their entirety and devise ways for a sustainable distribution of resources.

This calls for a change of course toward realizing “human security” that focuses on the lives and well-being of flesh-and-blood human beings, not on the interests of nations. New START (Strategic Arms Reduction Treaty), which is the last remaining nuclear disarmament treaty binding the United States and Russia, will expire in February next year. The two nations must agree to extend it to prevent unlimited arms expansion. And as a risk-reduction measure, they should also make their “no-first-use” declaration and ease their alert status. Creating a disarmament system involving China will eventually become an urgent task, but that cannot even begin unless the United States and Russia start moving in that direction. The Treaty on the Prohibition of Nuclear Weapons of 2017 reaffirmed

the inhumanity of nuclear weapons. And declaring that the weapons should never be used again, the treaty stated that the only way to ensure their non-use is to ban them under international law.

<http://www.asahi.com/ajw/articles/13609025>

Global alliance against nuclear weapons should expand further

The Asahi Shimbun, August 6, 2020

The Atomic Bomb Dome is seen in the early morning on Aug. 6. (Nobuhiro Shirai)

“Hiroshima was firebombed.” “It appears that (the city) has suffered slight damage.”

These passages are part of a very brief Asahi Shimbun report about the atomic bombing of Hiroshima published the following day. It was just the beginning of the tragedy of the world’s first use of nuclear weapons. Three days later, Nagasaki was also destroyed.

The instant a tremendous flash of light cut across the sky, high levels of radiation penetrated the bodies of hundreds of thousands of people. The detonation and deafening boom were followed by various radioactive materials spreading across the city.

These toxic materials later fell as “black rain” in wide areas around ground zero.

Seventy-five years on, a local court recently handed down a landmark ruling recognizing all people exposed to the radioactive rain as hibakusha, or atomic bomb survivors, eligible for a government relief program including those who were outside the areas covered by the program. But the trial still failed to clarify the geographical scope of exposure. 'Discovery' of health hazards of radiation, growing pessimism and sense of urgency and Passing Hibakusha philosophy to future generations.

<http://www.asahi.com/ajw/articles/13612316>

North Korea

Crisis in 2021?

John Burton

Korea Times, August 3, 2020

Could the Korean Peninsula see a renewed nuclear crisis in 2021? The probable election of Joe Biden as the next U.S. president in November will be viewed as unfavorable by North Korea. Biden has historically adopted a tougher stance on North Korea than Donald Trump, whose conciliatory approach to Pyongyang has reduced tensions since early 2018. North Korea may be emboldened to resist further U.S. pressure on the nuclear issue if it receives increased support from Beijing as Sino-American relations continue to deteriorate. Meanwhile, a diplomatic breakthrough between Washington and Pyongyang on the nuclear issue before the November election appears unlikely. North Korea is pressing for the relaxation of sanctions before making any concessions on reducing its nuclear arsenal and there is almost no indication that the Trump administration is willing to do that.

Biden will thus inherit a stalemate on the nuclear issue if he is inaugurated as the 46th U.S. president

in January 2021. Biden's previous foreign policy track record as chairman of the Senate Foreign Relations Committee and then vice president under Barack Obama suggests that he would adopt a hardline policy on North Korea. He is unlikely to meet North Korean leader Kim Jong-un, as Trump has done, unless concessions have been made by Pyongyang. There is already bad blood between Biden and North Korea. Biden last year described Kim as a "murderous dictator," which caused the North Korea media to call Biden a "rabid dog" that ought to be "beaten to death." Biden would be expected to place increased emphasis on human rights abuses in North Korea, a subject that Trump has largely ignored. Biden is also likely to resume scaled-up joint U.S.-South Korean military exercises (COVID-19 permitting) and maintain current U.S. troop levels in South Korea. The resumption of long-range missile tests could come even before the U.S. elections, with one date being suggested as Oct. 10 when North Korea celebrates the 75th anniversary of the founding of the ruling Workers' Party of Korea. This would enforce Pyongyang's message that whoever is elected president, it will remain a nuclear power and either Trump or Biden must continue to engage North Korea.

http://www.koreatimes.co.kr/www/opinion/2020/08/137_293751.html

South Korea

Facilities at North Korea nuclear complex may be damaged by flood: US think tank

Korea Times, August 3, 2020

Significant flooding has happened along a river near North Korean's Yongbyon nuclear complex, and facilities at the complex could have been damaged, a U.S. monitoring website said Thursday. The website 38 North, a think tank monitoring North Korea, made the analysis based on satellite imagery from Aug. 6, saying that "water had reached the two pump houses that service the reactors" at Yongbyon nuclear complex. "The August 6 imagery, when compared to imagery from July 22, shows a dramatic rise in the water level of the Kuryong River that flows alongside the Yongbyon complex," the think tank said. It said the flooding appears to be the worst in recent years. The think tank also revealed an image of a fully submerged dam on the Kuryong River and pointed out that the flood could potentially damage the pumps or clog piping systems that draw water from the river, causing the reactor to shut down.

The complex is home to a 5-megawatt nuclear reactor that was the source of weapons-grade plutonium for the North. Pyongyang can harvest one nuclear bomb worth of plutonium by reprocessing spent fuel rods from the reactor. "Although the 5 MWe reactor does not appear to have been operating for quite some time, and the Experimental Light Water Reactor (ELWR) has yet to come online, both would need consistent water flow to operate," it said. "Therefore, if or when either of the reactors is operating, clogged intakes and/or broken or damaged pumps would necessitate a shutdown," it said. Satellite imagery from Aug. 8 and 11, however, shows that the waters have

receded, suggesting there was no damage to key facilities, such as the Uranium Enrichment Plant (UEP), the think tank added.

http://www.koreatimes.co.kr/www/nation/2020/08/103_294314.html

Reports/Interviews

Nuke Sea-Launched Cruise Missile Would Bolster Deterrence, Officials Say

Jim Garamone

US Department of Defence, August 4, 2020

The United States retired its last nuclear sea-launched cruise missile in 2010 — one of only two remaining U.S. theater or tactical ("non-strategic") nuclear weapons. In contrast, Russia continued a comprehensive program to modernize and expand its low-yield theater and tactical nuclear weapons. What is more disturbing, officials said, is that Russian strategy actually contemplates the use of these nuclear capabilities in conflict. Russian strategic thought mistakenly believes that limited nuclear first use with low-yield weapons could provide Russia with a "coercive advantage" in a conflict, the State Department paper says.

Russia may have pursued this strategy because the United States, unlike Russia, retired most of its non-strategic nuclear systems. Russia may believe it can use theater or tactical weapons, the paper says, because the United States could not effectively respond and might be reluctant to escalate further by responding with strategic nuclear weapons.. The 2018 Nuclear Posture Review calls for adjustments to U.S. nuclear forces to close this perceived gap on the escalation ladder and reinforce deterrence against low-yield nuclear use, DOD officials said.

https://www.state.gov/wp-content/uploads/2020/07/T-Paper_SCLM-N-CLEARED_T-Final.pdf
(Arms Control and International Security papers)

<https://www.defense.gov/Explore/News/Article/Article/2299140/nuke-sea-launched-cruise-missile-would-bolster-deterrence-officials-say/>

Foreign media reactions on Sino-Iran partnership

Tehran Times, August 5, 2020

As the strategic Iran-China 25-year partnership moves from a leaked 18-page document in Farsi towards a full and final agreement, the deal has been a topic of debate and closely watched by foreign media analysts. As Washington is mulling how not to punish China for violating Hong Kong's autonomy law, the global economy holding its breath over any possible thaw in the trade war. The Sino-Iran geopolitical and economic partnership plan will prove to be another thorn in the way of normalizing U.S.-China ties. Any kind of easing of U.S. ties with Iran seems to be out of the question despite the looming November 3rd U.S. elections with contenders holding different positions on Iran. China Radio International published a report on Friday on the message of the IRGC drills, codenamed Payambar Azam 14 (Great Prophet 14), to America, saying: "You are under range of

Iranian missiles,' while some outlets describe the drills as "Iran's military bragging". In the middle of heightened tensions between U.S. and what media outlets are referring to as "Iran-China axis", here's a look at some of the headlines and analyses of some of the foreign media outlets:

The New York Times, August 2: Iran will expand nuclear programs and won't talk to U.S.

In a televised speech, Ayatollah Ali Khamenei said that negotiating with Washington over Iran's nuclear program would only help Trump get re-elected. That was Trump's reason for suggesting such talks in the first place, the Leader said. "This old man who is in charge in America apparently used negotiations with North Korea as propaganda," the Leader was quoted as saying, referring to Washington's oldest president in history. The newspaper pointed that the Leader directed his closest economic advisers to cement a 25-year military and economic partnership with China. Quoting Ayatollah Khamenei who said European countries involved with the nuclear deal were unreliable, and that their attempt to salvage the pact – such as creating a secure financial channel (INSTEX) so that Iran could maintain a limited amount of trade – were "useless games". In conclusion, the writer points out that since the U.S. pulled out of the nuclear deal in May 2018, Iran's currency has dropped sharply and inflation has surged, with budget deficits of nearly 30 percent this fiscal year and oil sales plummeting to 300,000 barrels a day.

<https://www.tehrantimes.com/news/450901/Foreign-media-reactions-on-Sino-Iran-partnership>

Soka Gakkai Calls for Elimination and Prohibition of Nuclear Weapons

TASS News Agency, August 6, 2020

On August 6, to commemorate the 75th anniversary of the atomic bombings of Hiroshima and Nagasaki, the Soka Gakkai Buddhist organization put out a statement calling for the elimination of nuclear weapons and the early entry into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW). The Soka Gakkai pledges to exert all efforts for the complete elimination of nuclear weapons and also urges the Japanese government to move toward participation in the TPNW, stating, "At this deeply significant juncture, the government of Japan, the only country to have suffered atomic bombings during war, should announce its readiness to consider participation in the TPNW, thus positively shaping the discourse on the elimination of nuclear weapons within the international community."

In the statement, Yoshiki Tanigawa, chair of the Soka Gakkai Council on Peace Issues, states, "In recent years, there are signs that a nuclear arms race among the nuclear-weapon states is again intensifying. At the same time, the global spread of the novel coronavirus has demonstrated that military force is incapable of resolving global challenges, compelling us to confront the question of what constitutes authentic security for human beings." On August 6 and 8 respectively, the Soka Gakkai in Hiroshima and Nagasaki will hold online meetings to listen to testimonies of hibakusha, the survivors of the atomic bombings. Over the past year, youth members in these areas have continued to collect testimonies of wartime experiences, including those of hibakusha, aiming to publish the latest volume this fall. The Soka Gakkai in Japan will also hold an online youth summit toward the renunciation of war in September.

<https://tass.com/press-releases/1186467>

Think tanks

The ever-growing danger of nuclear weapons

Manoj Joshi

Observer Research Foundation, August 10, 2020

The anniversaries of the Hiroshima and Nagasaki bombing last week should remind us that there are other sudden catastrophes that can bring far worse suffering than the Covid-19 pandemic. Unlike Covid-19, nuclear weapons were invented by human beings and stocked by them in large numbers. Their capacity to bring death and destruction are so vast that they could, in the process of deterring or punishing adversaries, devastate the perpetrators themselves.

It took more than a decade for the world powers to realise just how close they came to Armageddon. This was in the Cuban Missile Crisis which we now know was a near run thing. Despite their intense rivalry, the US and USSR realized that there would be no national boundaries limiting the impact of the use of nuclear weapons. So, the first step was the Limited Test Ban Treaty of 1963 that banned tests in the atmosphere, outer space and underwater. The seminal Nuclear Non-Proliferation Treaty of 1968 did commit its signatories to the eventual abolition of nuclear weapons, a promise that has been clearly ignored. Most agreements, multilateral, some plurilateral and others purely bilateral, have sought to reduce the likelihood of nuclear war and limit its scope and intensity, but not eliminate its possibility.

<https://www.orfonline.org/expert-speak/the-ever-growing-danger-of-nuclear-weapons/>

Bruce Blair: Challenging the accidental nuclear war machine at every turn

Jessica Sleight, Zia Mian, and Frank von Hippel

Bulletin of Atomic Scientists. August 15, 2020

Bruce Blair spent his professional life working to expose the dangers from the nuclear Doomsday Machine created by the United States and Soviet Union during their Cold War and advancing policies to reduce the risk of nuclear use. A leading expert on nuclear command and control, he focused especially on the risks of accidental nuclear war implicit in the “hair-trigger” postures of US and Soviet ballistic missiles. During his final 15 years, he led a campaign for the phased and verifiable elimination of all nuclear weapons. He died on July 19 at the age of 72 as a result of a severe stroke. With Blair’s death, the nuclear-disarmament movement has lost one of its most learned, creative and persistent leaders. The challenges of nuclear disarmament and, in the interim, reducing the danger of nuclear war, remain. Sadly, we must now carry on without Blair’s extraordinary focus, leadership, and innovative institution building. Those of us who have had the privilege of working with him will continue to be inspired by his quiet but dogged and comprehensive commitment to the mission.

<https://thebulletin.org/2020/08/bruce-blair-challenging-the-accidental-nuclear-war-machine-at-every-turn/>

Contribute Articles

Indian Pugwash Society welcomes research articles from students, researchers and faculties on Space, Missile, nuclear technology, WMD proliferation, arms control, disarmament, export controls and other related issues. Articles should be crisply written and should address contemporary debates in the policy arena. Manuscripts submitted for the consideration of the Indian Pugwash Society should be original contributions and should not have been submitted for consideration anywhere else. For further assistance, please contact us at: indianpugwashsociety@gmail.com

The Indian Pugwash Society aims to promote the study, discussion, and knowledge of and to stimulate general interest in, and to diffuse knowledge in regards to problems relating on WMD proliferation, arms control, disarmament, space security, export controls, nuclear technology and other related issues. This newsletter is part of the project "Emerging Nuclear Order in Asia: Implications for India" sanctioned to us by Department of Atomic Energy-Board of Research in Nuclear Sciences (DAE-BRNS).

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