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समाचार पत्रों से चयित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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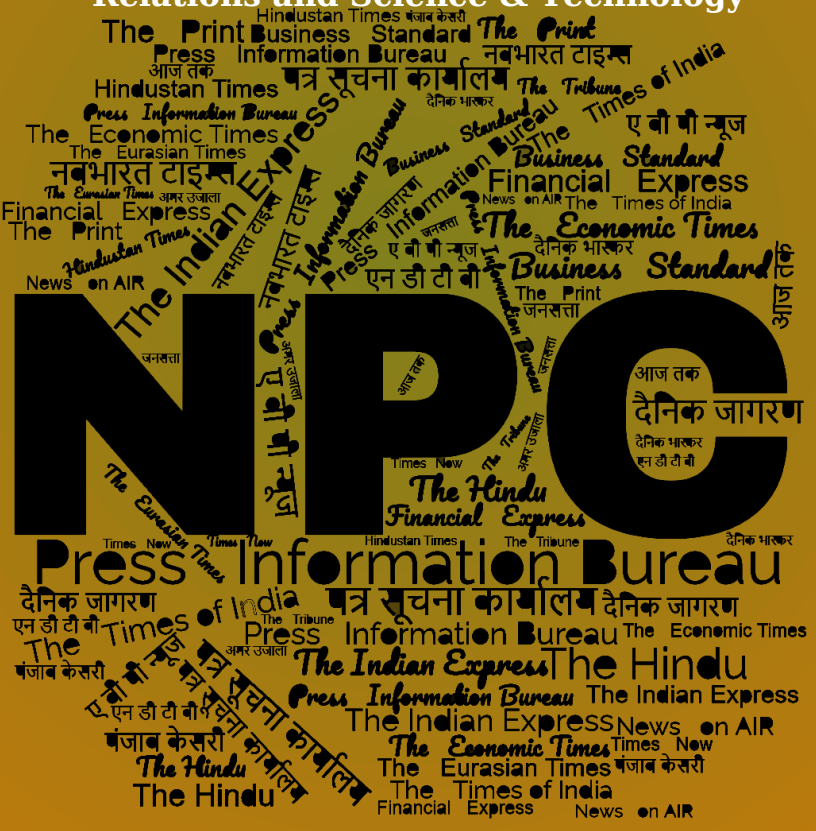

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Thu, 22 Feb 2024

International Maritime Seminar

Shri Jagdeep Dhankhar, the Hon'ble Vice President of India inaugurated the International Maritime Seminar, conducted today as part of MILAN 2024.

The International Maritime Seminar, which was a pivotal component of MILAN 2024, proved to be a convergence of global maritime excellence. The seminar served as a platform for collaboration, synergy, and growth among nations across the oceans.

The Chief of Naval Staff of Indian Navy, Naval Chiefs of Friendly Foreign Countries, Senior dignitaries, Delegates including Ambassadors, High Commissioners and senior naval officers from India and friendly foreign countries participated in the seminar. Their presence underscored the significance of fostering international dialogue and cooperation in the maritime domain.

Themed "Partners across Oceans: Collaboration, Synergy, Growth," the seminar featured an illuminating array of presentations and discussions. Papers presented by esteemed speakers from twelve nations delved into critical areas such as economic growth, maritime security, capacity building, climate change mitigation, blue economy initiatives, and sustainable development of maritime infrastructure. The International Maritime Seminar, as part of MILAN 2024, stood as a testament to the enduring importance of international cooperation in addressing the challenges and opportunities facing the global maritime community. Through meaningful dialogue and partnership, participants strived to pave the way for a more secure, sustainable, and prosperous maritime realm.

https://pib.gov.in/PressReleasePage.aspx?PRID=2008067

THE TIMES OF INDIA

Thu, 22 Feb 2024

Boost for Indian Navy: CCS Clears Rs 19,000 Crore BrahMos Missile Deal

The Indian Navy is set to receive a significant upgrade with the Cabinet Committee on Security (CCS) approving a substantial deal for the acquisition of over 200 BrahMos extended-range

supersonic cruise missiles. As per an ANI report, the deal, valued at around Rs 19,000 crore, aims to enhance the Navy's warship capabilities, particularly in anti-ship and attack operations.

According to top government sources, the contract between BrahMos Aerospace and the ministry of defence is expected to be signed in the first week of March. "The BrahMos is the main weapon for anti-ship and attack operations for the Indian navy warships which have been regularly firing the weapon system," they noted.

The big picture- The BrahMos Aerospace is a joint venture between India and Russia that makes supersonic cruise missiles that can be fired from submarines, ships, aircraft, or land platforms.

The BrahMos missile has undergone a major indigenisation process by the BrahMos corporation and more components are being made locally.

Several countries in the Southeast Asian region have expressed keen interest in the missile system for various applications. The BrahMos missile is also ready to be exported soon to the Philippines, which is its first international customer.

With the Philippines set to become the first global customer, BrahMos Aerospace is eyeing a $5 billion export target by 2025, Atul Rane, the head of BrahMos Aerospace, said.

The sale of the BrahMos missile system to the partner countries is also likely to create more opportunities for other successful weapon systems like the Akash, ATAGS howitzers and other equipment from the Indian industry.

What next:

The Indian defence sector is witnessing a paradigm shift towards indigenization and self-reliance, with significant deals and projects being approved. The recent clearance of defence acquisition projects worth Rs 84,560 crore, including mid-air refuellers and maritime reconnaissance aircraft, underscores the government's commitment to bolstering the armed forces' capabilities while promoting domestic manufacturing.

The strategic move to enhance the Indian Navy's firepower with BrahMos missiles and the push for 'aatmanirbharta' (self-reliance) in defence manufacturing reflect India's broader defence strategy. These developments not only aim to strengthen national security but also position India as a key player in the global defence export market.

https://timesofindia.indiatimes.com/india/boost-for-indian-navy-ccs-clears-rs-19000-crore-brahmos-missile-deal/articleshow/107905206.cms

Business Standard

Thu, 22 Feb 2024

Cabinet Gives Nod to Rs 13,000 Crore IAF Projects for High-power Radars

To enhance the capability of the Indian Air Force in keeping a watchful eye on the air activity in China and Pakistan and protect its vital assets, the Cabinet Committee on Security has cleared deals worth around Rs 13,000 crore to acquire new high-power radars and close-in weapon systems from Indian manufacturer Larsen and Toubro. The new radars under a project worth around Rs 6,000 crore have been cleared by the CCS for the Indian Air Force, replacing and augmenting the existing chain of radars along both the borders with China and Pakistan, top government sources told ANI.

The ambitious Made in India Close-in Weapon System project based on a derivative of air defence guns has also been cleared, which will provide strong protection to vital assets and points against attacks by drones and aircraft. The project is worth around Rs 7,000 crore, they said.

The new radars and CIWS are set to be manufactured by Larsen and Toubro in partnership with multiple Indian small and medium enterprises and would create a significant number of jobs in the defence sector, they said.

The radar project has been cleared at a time when India has plans to strengthen its radar coverage all along its borders with both its northern and western adversaries.

The Indian Air Force has plans to install a large number of radars and will be installing them in phases. The radars planned to be acquired in the next phase of acquisition would be completely indigenous and would provide strong coverage of the intended areas.

The CIWS project was conceived some years ago when drones were detected by security agencies near a critical area and a need was felt to provide a close-in weapon system to provide protection, they said.

The project was developed closely by the Air Force and Indian Army officials working closely on it. An Army Air Defence officer worked closely with the Air Force Air Defense Directorate to take the programme forward.

Air Chief Marshal VR Chaudhari has also been closely associated with the Make in India project in different offices and ranks.

The CCS, led by the Narendra Modi government, has also cleared an important project for the Indian Navy to buy over 200 BrahMos supersonic cruise missiles worth over Rs 19,000 crore.

The project was cleared after the new BrahMos management under Chairman Atul Rane and his deputy Sanjeev Joshi started working and focusing on consolidated acquisitions by the forces.

The Narendra Modi government has focused primarily on indigenous projects and is expected to clear many more made-in-India acquisitions in the Defence Acquisition Council and other levels in the coming days.

https://www.business-standard.com/india-news/cabinet-gives-nod-to-rs-13-000-crore-iaf-projects-for-high-power-radars-124022201092_1.html

THE TIMES OF INDIA

Thu, 22 Feb 2024

Trilateral Exercise 'Dosti-16' Kicks off in Maldives with Chinese Research Vessel Nearby

During the 16th edition of the India-Maldives-Sri Lanka trilateral exercise "Dosti" with Bangladesh as observer, ICGS Samarth (with integral helo), ICGS Abhinav & ICG Dornier arrived in Male. According to media reports, a Chinese research vessel was anchored near Male port.

— HCIMaldives (@HCIMaldives)

"The Chinese research vessel Xiang Yang Hong 03 was moored close to Male City this morning. Around noon, the ship was shown to be near Thilafushi," local media reported, quoting the Marine Traffic website that tracks all ocean liners across the globe.

The Maldives government granted permission for the research vessel, capable of conducting research and surveys, to dock at Male port on January 23. Authorities said that the vessel's stopover was solely for replenishment purposes and assured that it would not engage in any research activities while in Maldivian waters.

India has expressed concern about the movement of the Xiang Yang Hong 03 vessel in Indian Ocean waters and also prevailed on Sri Lanka to refuse permission for the ship to dock at Colombo port. In February, Chinese foreign ministry spokesperson Wang Wenbin said the ship's activities complied with the UN Convention on the Law of the Sea (UNCLOS).

"China's scientific research activities in relevant waters are for peaceful purposes and aimed at contributing to humanity's scientific understanding of the ocean," Wang said in response to a question on the research ship's plan to dock at the Maldives.

Meanwhile, Thursday morning, Coast Guards of Maldives, India, and Sri Lanka, along with observers from Bangladesh, joined in at the Trilateral Joint Exercise 'Dosti-16.'

"MNDF welcomes participating ships from India and Sri Lanka for the Trilateral Joint Exercise 'Dosti-16' from Feb 22-25. Coast Guards of Maldives, India, and Sri Lanka, along with observers from Bangladesh, join in this biennial event to enhance collaboration between the forces," Maldives National Defence Force (MNDF) said in a post on X along with the photos of the two vessels.

— MNDF_Official (@MNDF_Official)

The visit of the Indian coast guard ship to the Maldives comes amidst Male's demand for the withdrawal of 88 Indian military personnel manning three Indian aviation platforms in the island nation by March 15.

https://timesofindia.indiatimes.com/india/trilateral-exercise-dosti-16-kicks-off-in-maldives-with-chinese-research-vessel-nearby/articleshow/107919020.cms

THE HINDU BusinessLine

Fri, 23 Feb 2024

Piracy, Armed Robbery Witness 20% Jump in Indian Ocean: Navy

The ongoing months-long turbulence in oceans has been captured in a report the Indian Navy released on Thursday, which stated piracy and armed robbery in the Indian Ocean Region (IOR) witnessed a 20 per cent jump in 2023, with 194 incidents recorded last year in comparison to 161 in 2022.

The monthly average incidents also rose from 13 in 2022 to about 16 in 2023, pointed out the report compiled by Information Fusion Centre – Indian Ocean Region (IFC-IOR), a regional maritime security centre hosted by the Indian Navy in Gurugram.

Hijacking, kidnapping, illegal boarding, attack, sea robbery, and theft attempted incidents have been put together to compile this data by the IFC-IOR Centre, which has liaison officers from 12 countries including the United States of America and the United Kingdom. Despite the surge in incidents, a positive trend emerged as 78 per cent of reported incidents involved no violence, the

IFC-IOR Centre noted. However, the report flagged that isolated instances of violence resulted in severe injuries and death of a person.

According to the report, "while piracy and armed robbery remained suppressed in most regions, South East Asia saw a surge, accounting for 103 incidents. East Africa experienced a significant increase, notably in hijacking of dhows off the coast of Somalia and petty thefts off Mauritius".

The type of incidents varied with sea theft being the most reported (43 per cent of total incidents) and bulk carriers, tankers, and pleasure crafts being the most targeted vessels. Most incidents occurred at night (83 per cent) and involved small groups of perpetrators.

The Centre also stated the ongoing conflicts, hinting between Russia and Ukraine, Israel and Hamas, and recent developments in the Red Sea, indicating Iran-backed Houthi's attacks on commercial vessels, coupled with the removal of 'High Risk Area' with effect from January 1, 2023, and depleting fishing stocks due to increased illegal, unreported and unregulated (IUU) fishing activities are likely to pose challenges in Gulf of Eden.

Contraband smuggling on rise

Overall, the IFC-IOR centre said it monitored, recorded, and analysed a total of 3,955 incidents across the IOR and adjacent seas. Contraband smuggling, especially narcotics, has also risen, recording an 18 per cent uptick in incidents, that led to 958 seizures. "Narcotics accounted for 31 per cent of incidents while domestic products and fuel smuggling each represented 17 per cent of recorded instances", the report said. "Major drug seizures in the IOR included large shipments of Amphetamine Type Stimulants (ATS) such as methamphetamine, cannabinoids, and opioids such as heroin," read the report.

In this segment, East Africa experienced a notable 70 per cent upswing in reported incidents with drugs topping the list. Conversely, West Asia saw an overall 35 per cent decrease but witnessed a rise in weapon smuggling. South Asia faced a substantial 59 per cent increase, particularly in incidents involving drugs, domestic products, and natural resources, informed the Indian Navy.

South East Asia recorded a 16 per cent rise, with fuel smuggling being pre-dominant. "The trends highlight the need for region-specific interventions, acknowledging the varying dynamics and challenges each region encounters," the Centre observed.

https://www.thehindubusinessline.com/news/national/piracy-armed-robbery-witness-20-jump-in-indian-ocean-navy/article67877507.ece

THE TIMES OF INDIA

Fri, 23 Feb 2024

Wreckage of Pakistan Submarine, which Sank in 1971, Found off Vizag

A newly acquired Indian Navy deep submergence rescue vehicle (DSRV) has recently located the wreckage of PNS Ghazi, the Pakistani submarine that sunk on December 4, 1971 during the India-Pakistan war.

The Tench-class submarine, which served earlier in the US Navy as USS Diablo, was found at a depth of around 100 metres about 2 to 2.5 km off the coast. However, Indian Navy does not want to touch it out of respect for those who fell in action, in true Navy tradition, sources here said.

The sinking of PNS Ghazi with 93 men (11 officers and 82 sailors) on board off the coast of Visakhapatnam was considered a high point in the war, which ended with the creation of Bangladesh in 1972. Pakistan had despatched US-made PNS Ghazi to mine India's eastern seaboard and to locate, shadow and sink INS Vikrant, India's British-built Majestic-class aircraft carrier.

‘2 submarines lying at bottom of sea off Vizag coast’

Ghazi left Karachi on November 14, 1971 and quietly sailed 4,800 km around the Indian peninsula to reach Vizag coast.

India despatched its destroyer, INS Rajput, which tracked the Ghazi and dropped depth charges, leading to its sinking. The Pakistani military has a different view, attributing its sinking to accidental explosions. PNS Ghazi is not the only submarine that lies on the floor of the Bay of Bengal near Vizag. A Japanese submarine of the Imperial Japanese Navy (RO-110) was sunk off the coast of Rambilli locality, in undivided Vizag district, during World War II (Feb 12, 1944). The submarine was sunk by HMAS Launceston and HMIS Jumna using depth charges.

Veteran naval personnel said two submarines were lying at the bottom of the sea close to the Vizag coast. “However, the Navy has not touched the Japanese submarine as naval personnel strongly believe that it is the final resting place of the brave souls, and we let them rest in peace,” they said.

Vizag is one of few coastal cities with deep inlets offering anchorage for sea-faring ships thanks to an average depth of about 16 metres. While more than 40 countries operate submarines, very few nations have developed the capability to deploy a DSRV. These vehicles can conduct submarine rescue operations at depths of up to 1,000 metres. India has now operated two DSRVs that can be either shipmounted or transportable.

Big boost to 'Make in India': PM Modi government clears purchase of 220 BrahMos extended-range missiles for Indian Navy

https://timesofindia.indiatimes.com/india/wreckage-of-pakistan-submarine-which-sank-in-71-found-off-vizag/articleshow/107924621.cms

Thu, 22 Feb 2024

Pakistan Inks $1.6 Billion Contract to Supply JF-17C Fighter Jets to Azerbaijan: Reports

Pakistan and Azerbaijan share deep defense ties following the signing of a military agreement between the two countries in 2003. This was followed by a decision to conduct joint military drills starting in 2016.

Pakistan has inked a $1.6 billion deal to export JF-17C Block-III warplanes to Azerbaijan, the country's largest order to supply defense equipment abroad, the South Caucasus nation's media reported on Thursday.

As part of the agreement, Azerbaijan would receive 8 JF-17C Block-III aircraft from Pakistan besides ammunition, including air-to-surface missiles.

The South Asian sovereign state would also train Azerbaijani military personnel in air combat.

This would mean that Azerbaijani troops would undertake sorties on the JF-17C Block-III under the supervision of the Pakistan Air Force (PAF) servicemen.

With this Azerbaijan joins Myanmar and Nigeria as the other two nations that have acquired JF-17 Thunder jets from Pakistan.

Interestingly, Pakistan is among a handful of countries with diplomatic relations with Azerbaijan and its arch-foe Armenia.

However, the Islamic Republic has been one of the staunchest supporters of Baku in its conflict with Yerevan.

Armenia and Azerbaijan have been locked in a decades-long dispute over the Nagorno-Karabakh region which was administered by the former till September 2023 before the latter took complete control over it in January 2024.

https://sputniknews.in/20240222/pakistan-inks-16-billion-contract-to-supply-jf-17c-fighter-jets-to-azerbaijan-reports-6636173.html

Thu, 22 Feb 2024

Putin Sends Signal to West with Flight on Nuclear-capable Bomber

Russian President Vladimir Putin flew on a modernised Tu-160M nuclear-capable strategic bomber on Thursday, in a move likely to be seen in the West as a pointed reminder of Moscow's nuclear capabilities.

The giant swing-wing plane, codenamed "Blackjacks" by military alliance NATO, is a modernised version of a Cold War-era bomber that the former Soviet Union would have deployed in the event of nuclear war to deliver weapons at long distances.

State TV showed Putin clambering down a ladder from the plane after the flight and telling reporters it was a reliable and modernised aircraft that could be accepted by the Russian Air Force.

"It's a new machine, a lot about it is new. It's easier to control. It's reliable," said Putin.

The Russian leader, who is expected to easily win another six-year term next month, made the flight at a time when Moscow and the West are at odds over Russia's war in Ukraine and the death in prison of opposition politician Alexei Navalny.

Some Russian and U.S. diplomats say they do not remember a time of worse relations between the world's two biggest nuclear powers, including during the 1962 Cuban Missile Crisis.

State TV showed the giant plane, which Russia nicknames "White Swans", taking off and landing at a runway belonging to the factory in Kazan that makes the modernised supersonic aircraft, with correspondent Pavel Zarubin excitedly calling it "a unique event".

Kremlin spokesman Dmitry Peskov said the plane's flight path was a military secret. The flight with Putin aboard had lasted 30 minutes, Russian news agencies reported. The Tu-160M, which has a crew of four, is capable of carrying 12 cruise missiles or 12 short-range nuclear missiles and can fly 12,000 km (7,500 miles) non—stop without refuelling.

Russia's nuclear doctrine sets out the conditions under which a Russian president would consider using a nuclear weapon: broadly as a response to an attack using nuclear or other weapons of mass destruction, or to the use of conventional weapons against Russia "when the very existence of the state is put under threat".

Former President Dmitry Medvedev, now deputy chairman of Russia's Security Council, has repeatedly warned of the risk of a nuclear conflict with the West since Moscow sent tens of thousands of troops into Ukraine in 2022.

But Putin, who is commander-in-chief of Russia's armed forces, said in October that the existence of the Russian state was not under threat and that "no person of sound mind and clear memory would think of using nuclear weapons against Russia".

Putin, 71, flew in an older version of the Tu-160 aircraft in 2005 during a training exercise.

Under a contract signed in 2018, 10 of the modernised Tu-160M nuclear bombers are meant to be delivered to the Russian Air Force up to 2027 at a cost of 15 billion roubles ($163 million) each.

Tupolev, the plane's manufacturer, says the modernised version was 60% more effective than the older version with significant improvements to its weaponry, navigation and avionics.

https://www.reuters.com/world/europe/putin-fly-modernised-russian-supersonic-strategic-bomber-2024-02-22/

Science & Technology News

Press Information Bureau
Government of India

Ministry of Science & Technology

Thu, 22 Feb 2024

New Prototype Developed to Generate Neurovascular Tissues/Organoids from Autologous Blood can Help in Precision Medicine

A new model for generating mass of neurovascular tissues or neurovascular organoids/embryoids (NVOEs) from autologous blood can help in the investigation of impaired brain functioning and development by analysing in neuroimaging (preclinical) scans, correlating with altered blood supply.

The field of neural organoids is rapidly progressing and has fueled the hope (and hype) for improved understanding of brain development and functions, modeling of neural diseases, discovery of new drugs, and supply of surrogate sources of transplantation. Most such neuronal organoids are derived from genetic overexpression of embryonic/extraembryonic transcription factors, and they lack vascularization. As an advancement a new approach of co-culturing blood vessel organoids with cerebral organoids was recently proposed, they lacked active blood flow and are very laborious and not cost-effective. The most advanced embryo models with neurogenesis

/organogenesis also lack functional vasculature and hence have limited scope for modeling brain-activity based investigative studies.

As an answer to this challenge, researchers of Post Graduate Institute of Medical Education & Research, PGIMER, Chandigarh have come up with a prototype for establishment and characterization of novel self-organizing neurovascular organoids/ embryoids (NVOEs) entirely from autologous blood without any genetic maneuvering or morphogen supplementation.

The research funded by Anusandhan National Research Foundation (ANRF-erstwhile SERB) can produce functional vascularised embryoids on its own and requires no guided patterning. It is cost-efficient as it requires no specific differential media, growth factor or differentiating morphogens for culturing, but only autologous plasma and blood cells.

The existence of a functioning vasculature in neurovascular embryoid was verified by detecting both haemoglobin (Hb) and deoxy haemoglobin (HbO2) signals using the BOLD (Blood-Oxygen-Level-Dependent) signal concept. (data attached).

The implications are vast for studying neurological (neurosensory/motor and neuro-immune) disease pathways, neuroregeneration, preclinical neuroimaging, and endogenous gene editing, and autologous immunotherapies for tumors, and autoimmune diseases.

The researchers who are in the process of filing a patent for this at the Punjab State Council for Science and Technology, Chandigarh, are employing these models to understand the genetic basis of neurosensory hearing loss and auditory comprehension challenges (altered central auditory activity) in children with congenital Sensorineural Hearing Loss (SNHL) (early onset), with and without comorbid features (autistic- like behaviour) or neurodevelopmental defects (intellectual disability, ANSD, language disorders). These children have poor Cochlear Implant communication outcomes that encouraged the team to investigate the altered higher/central auditory activity pathways by generating embryoids marked by neurovascular coupling; the fundamental phenomenon that drives sensory (peripheral)-evoked brain (central) activity. Functional neuroimaging tools like fMRI is only clinical tool that can be employed to monitor altered brain activity at our health care centre, however, it is currently not actively used for congenital SNHL, ANSD or autistic children due to incompatible magnet-based cochlear implants or hyperactivity of kids that dissuades fMRI owing to motional artifacts or requirement for prolonged anaesthesia in these kids.

The prototype can help develop patient-specific embryoid models (precision medicine) for congenital neurosensory, neurodevelopmental and neurodegenerative diseases like Autism, ADHD, ANSD, Alzheimer’s and Parkinson's. It can also be used for deciphering genetics and neural circuits, testing drugs bypassing the blood-brain barrier, and identifying novel biomarkers for early neurological diseases.

https://pib.gov.in/PressReleasePage.aspx?PRID=2008039

THE TIMES OF INDIA

Thu, 22 Feb 2024

In a 1st, CERN Team, Including Indian Scientist, Achieves Laser Cooling of Exotic Atom

In a major scientific breakthrough, an international team of researchers has successfully demonstrated laser cooling of Positronium for the first time. The breakthrough experiment was

carried out by the Antihydrogen Experiment: Gravity, Interferometry, Spectroscopy (AEgIS) collaboration at the European Organization for Nuclear Research (CERN).

The results, published in the journal Physical Review Letters, show that the researchers were able to cool Positronium atoms from about 380 Kelvin to 170 Kelvin using a specialised laser system. Positronium is an exotic atom consisting of an electron and its antimatter counterpart called a positron. “This is the first time Positronium has been laser cooled. It opens up possibilities for further advancements in antimatter research and tests of the equivalence principle between matter and antimatter,” said Prof Sadiq Rangwala of Raman Research Institute, the only Indian physicist who is part of the AEgIS collaboration.

The cooling of Positronium atoms was achieved through a highly complex process using an alexandrite laser system developed specifically for this experiment. According to Prof. Rangwala, who designed critical laser diagnostics for the experiment, the technological challenges involved were immense.

“We had to introduce numerous innovations in lasers, laser alignment, timing and control systems to make this science a reality under the difficult conditions of an accelerator beam hall,” he said.

The breakthrough could pave the way for exotic systems like Bose-Einstein Condensates of Positronium atoms. It is also an important step towards the larger goals of the AEgIS experiment involving precisely comparing the properties of antimatter systems with their matter counterparts. This could finally help solve one of the biggest mysteries in physics today around the imbalance between matter and antimatter in the universe.

The AEgIS collaboration comprises 19 European research groups along with Prof. Rangwala's team from India. Their result comes after years of dedicated research towards using laser cooling and precision spectroscopy techniques to gain insights into antimatter systems.

https://timesofindia.indiatimes.com/home/science/rri-scientist-part-of-cern-team-that-achieves-laser-cooling-of-exotic-atom/articleshow/107922355.cms

दैनिक भास्कर

Fri, 23 Feb 2024

जापान ने दुनिया का पहला लकड़ी का सैटेलाइट बनाया:इससे स्पेस में कचरा कम होगा, अमेरिकी रॉकेट से जल्द लॉन्चिंग की तैयारी

जापान के वैज्ञानिकों ने दुनिया का पहला वुडन सैटेलाइट बनाया है। ब्रिटिश मीडिया 'द गार्डियन' की रिपोर्ट के मुताबिक, दुनिया का पहला लकड़ी से बना सैटेलाइट जल्द अमेरिकी रॉकेट से लॉन्च किया जाएगा। इसकी तैयारियां की जा रही है।

क्योटो यूनिवर्सिटी के एयरोस्पेस इंजिनियर्स ने इसे बनाया है। इसका नाम लिग्नोसैट रखा गया है। इससे अंतरिक्ष में होने वाले प्रदूषण को कम किया जा सकेगा। जिस लकड़ी से यह बना है वो आसानी से टूटती नहीं है।

मंगोलियाई लकड़ी का इस्तेमाल हुआ

स्पेस में कई देशों की सैटेलाइट्स हैं। ये एक समय के बाद खुद नष्ट हो जाते हैं। इसके टुकड़े अंतरिक्ष में ही मंडराते रहते हैं। लेकिन कुछ टुकड़े धरती पर गिर जाते हैं। जो कई बार तबाही ला सकते हैं।

इस कचरे से बचने और अंतरिक्ष में स्पेस पॉल्यूशन कम करने के लिए जापान के वैज्ञानिकों ने लड़की का सैटेलाइट बनाया है। वैज्ञानिकों ने बताया कि इस सैटेलाइट को मंगोलियाई लकड़ी से बनाया गया है। ये स्थिर होती है और टूटती नहीं है।

लकड़ी बायोडिग्रेडेबल होती है

क्योटो यूनिवर्सिटी के इंजिनियर कोजी मुराता ने कहा- लकड़ी बायोडिग्रेडेबल होती है। यानी पर्यावरण के अनुकूल होती है। दूसरे शब्दों में कहें तो बायोडिग्रेडेबल चीजें नेचुरल तरीके से प्रकृति में मिलकर नष्ट हो जाती हैं और पर्यावरण को नुकसान नहीं पहुंचातीं। इसे ध्यान में रखते हुए लकड़ी का सैटेलाइट बनाया गया है।

लड़की के सैटेलाइट की जरूरत क्यों...

क्योटो यूनिवर्सिटी के अन्य इंजिनियर ताकाओ दोई ने कहा- मेटल से बनी सैटेलाइट्स स्पेस में तबाह हो जाती हैं। इसके टुकड़े और कई बार धरती पर वापस आती हुए पृथ्वी के वायुमंडल में प्रवेश करते ही जल जाते हैं। इनके जलने पर छोटे एल्युमिना कण बनाते हैं। ये कण ऊपरी वायुमंडल में कई सालों तक मौजूद रहते हैं। इसका बुरा असर पृथ्वी के पर्यावरण पर पड़ता है।

मेटल सैटेलाइट ओजोन लेयर के लिए खतरा

'द गार्डियन' की रिपोर्ट के मुताबिक, अनुमान है कि आने वाले समय में सालाना 2 हजार से ज्यादा अंतरिक्ष यान (स्पेसक्राफ्ट) लॉन्च किए जाएंगे। इनसे ऊपरी वायुमंडल में भारी मात्रा में एल्यूमीनियम जमा होने की संभावना है। ये बड़ी समस्या पैदा कर सकता है।

कुछ रिसर्च में दावा किया गया है कि इससे ओजोन लेयर भी कमजोर हो जाएगी। ओजोन लेयर पृथ्वी को सूरज की खतरनाक अल्ट्रावायलेट रे से बचाती है।

https://www.bhaskar.com/international/news/japan-to-launch-worlds-first-wooden-satellite-to-combat-space-pollution-132621717.html