समाचार पत्रों से चयित अंश
Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

A Daily Current Awareness Service

Vol. 44 No. 239 12 December 2019

रक्षा विज्ञान पुस्तकालय
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INDUS DICTUM

Thu, 12 Dec 2019

DefExpo 2020: DRDO, Bharat Forge conduct webinar series by MoD from today

New Delhi: The Ministry of Defence (MoD) said in a Press communication today that it is organising a series of web seminars (webinars) from today, 10 December, in the run-up to DefExpo 2020. The 11th edition of the biennial flagship event will be held in Uttar Pradesh capital Lucknow from 5-8 February 2020.

The webinars will be conducted by leading luminaries namely Secretary, Department of Defence R&D and Defence Research and Development Organisation (DRDO) Chairman, G Satheesh Reddy; Chairman & MD Bharat Forge Ltd, Baba Kalyani; Founder & President of Synergia Foundation Tobby Simon, IIT Bhilai Director & Member of Artificial Intelligence Task Force for Defence; Dr Rajat Moona; and Dr Kota Harinarayana. Officials from MoD Department of Defence Production & Invest India will also be in attendance.

The webinars will focus on path-breaking topics and will be streamed worldwide, said the MoD, adding that the topics will be of academic interest and relevance to Defence, aerospace and security industry, academia and student fraternity.

The details of the webinars, schedule, speakers' profile, brief on the topics and the link for participation for each session are available on DefExpo 2020 website. The webinars will be streamed live on YouTube and recordings will also be made available on the DefExpo website.

DefExpo 2020 will cover the complete spectrum of the country's aerospace, Defence and homeland security interests. The themes are 'India – The Emerging Defence Manufacturing Hub' and 'Digital Transformation of Defence'.

The Expo will focus on bringing to the forefront digital advances in the industry, and providing a platform for drivers of such transformation to come together.

https://indusdictum.com/2019/12/10/defexpo-2020-drdo-bharat-forge-conduct-webinar-series-by-mod-from-today/

Thu, 12 Dec 2019

Naval weapon systems exhibition 'NAVARMS 2019' for Defence industry & users begins 12 Dec

New Delhi: The 4th edition of the International Seminar-cum-Exhibition on Naval Weapon Systems 'NAVARMS 2019' with the theme 'Make in India – Fight Category: Opportunities and Imperatives' is scheduled at the Institute for Defence Studies and Analysis (IDSA), Development Enclave, New Delhi on 12 & 13 December.

The two-day event spread over five plenary sessions will provide opportunities for exchange of ideas, create awareness, and identify emerging prospects for Indian and International Defence industries in the domain of Naval Weapon Systems.

NAVARMS is the only international seminar and exhibition on Naval Weapon Systems conducted in the country to invite all stakeholders in the life cycle management of Naval Weapons and provide a common platform to share their views and concerns, said the Ministry of Defence (MoD) in a Press communication.

Union Defence Minister Rajnath Singh will address the gathering during the Exhibition's inaugural session on 12 Dec. The past three editions of NAVARMS organised in 2007, 2010 and 2013 have aroused enthusiasm and active participation from the Defence industry, Ministry of Defence, DRDO and the users, said the MoD.

India's maritime character and vital geo-strategic location are twin factors that have defined her growth as a nation and evolution as a civilisation, said the MoD communication, adding that the Indian Navy today remains the principal manifestation of India's maritime power and plays a central role in safeguarding and prompting her security and national interests in the maritime domain.

The Navy's roles and responsibilities have also expanded significantly over the years in response to changing geo-economic and geo-strategic circumstances, said the MoD communication, adding that these roles necessitate a wide inventory of weapon systems that cater for India's security-cum-threat calculus.

Today, there is wider acknowledgement of the role the Navy can play in nation building and enhancing maritime security in the region, said the MoD communication, adding that with an intent to convert Defence expenditure into an investment to fuel growth, the Indian Navy is at the forefront of promoting indigenous Defence manufacturing and has been collaborating with the private sector to achieve self-reliance.

The 'Make in India' initiative, setting up of Defence industrial corridors and access of Defence testing facilities to Indian Industries are significant programs of the Govt of India, said the MoD communication, adding that these initiatives are aimed at providing Indian Industries with opportunities in the domestic as well as global arenas to enter into strategic partnerships with foreign Original Equipment Manufacturers (OEMs) and DRDO to harness avenues in the technology intensive 'Fight' category.

The first session of 'NAVARMS-19' will set the stage for the two-day seminar, with Indian Navy speakers bringing out 'Opportunities for Industry in Naval Weapon Systems – 2030' in all three dimensions viz. surface, air & underwater.

The second session on ‘Needs and Concerns of the User and Industry’ will provide a platform to users and the industry to bring out their respective needs and concerns with prevailing policies and issues as well as envisioned environment, and seek views from all stakeholders to bridge the gap between expectations of the user and capabilities of the industry, said the MoD.

The third session focuses on ‘Naval Weapon Systems – Modern Trends and Technology in Upgrade & Upkeep’, while the fourth session is an interactive session of Panel Discussion on ‘Govt Policy Imperatives to Encourage Indigenisation’.

The last session on ‘Building of Indigenous Capability through Collaborative Approach between Industry, R&D organisations and Indian Navy’ will provide a platform for industry, DRDO and the user to highlight the capability gaps existing in the system and way ahead to bridge them using modern technology, infrastructure augmentation, increased investment in R&D etc through collaborative approach.

To enable companies to gain maximum benefit from this platform, a parallel technology display in the form of a two-day exhibition is also organized to demonstrate the Industry’s capabilities to key users.

https://indusdictum.com/2019/12/11/naval-weapon-systems-exhibition-navarms-2019-for-defence-industry-users-begins-12-dec/

yahoo! news

Thu, 12 Dec 2019

Scientists train RPF to identify nuclear threats

Mumbai: In a bid to identify or tackle with any nuclear threat on the Indian Railway in the future, the railway board has taken a decision of giving special training to all the zonal railway police force.

For this, they have tied up with the scientists from Defense Research and Development Organisation (DRDO), who will be providing training related to Chemical, Biological, Radiology and Nuclear (CBRN).

This comes after the railway board held a meeting last year, discussing disaster-related issues that can affect the railway, in which they decided to train all zonal RPF.

"Since many countries are making nuclear weapons, the board has decided to start with the training process, which will help them handle such situations," said an officer.

Last week, 30 RPF from the Western Railway underwent training for three days. Four scientists from DRDO and radiologists from the King Edward Memorial (KEM) hospital gave them training regarding CBRN.

In this training, the personnel have been advised to take precautions in case of chemical attack on mail/express trains or railway stations.

"We were given information on how to prevent CBRN disasters, detect them, provide care and protection during a search, control the damage in the event of a CBRN attack, and how to manage the impact," said an RPF officer.

Members of the Rail Pravashi Sangh said the railways has many problems that are not solved. "On a daily basis, commuters are facing problems, and the railways is interested on wasting money on such things, which is of no use. RPF should be given training on crowd management and how to handle cases that happen everyday," he said.

https://in.news.yahoo.com/scientists-train-rpf-identify-nuclear-020007289.html

Thu, 12 Dec 2019

Government to collaborate with IIT and IISC to get futuristic defense technologies

By Jitendra Pratap Singh

In a recent press release, the ministry of defence has stated that it has set up a national task force which will bring in India's premier technical and research institutes to work together to address the defence and security needs of the country indigenously.

As stated, the task force will aim to achieve leadership in defence based futuristic technologies. It will first identify all the niche domains and scrounge them from the very grass route level to develop the need-based warhead components and technologies. The task force will also identify some higher institutions and research centres along with DRDO to bring awareness and training of the latest equipment and technologies.

The task force has onboard directors from all prestigious institutes comprising the director from Indian Institutes of Science (IISC-Bangalore), director from National Institute of Technology (NIT Durgapur), Vice-Chancellor of University of Hyderabad and top officials of Defence Research and Development Organisation (DRDO) chaired by the Director of Indian Institute of Technology (IIT-Delhi). The task force in its first session has identified about 60 projects which will give extra cutting-edge technology to our defence forces. Starting from the bulletproof vests to robotic exoskeletons and lightweight full-body armours the projects will also cater to the need of artificial intelligence-based cyber defence system to operate in a swift and silent environment.

Among other identified areas they have also planned to focus on health and hygiene of the defence personnel and their training on advance aircraft applications for which they have collaborated with NABL (National Accreditation Board of Testing and Calibration Laboratories) and HAL (Hindustan Aeronautics Limited) respectively. Besides developing a larger ecosystem to cater India's need of a robust defence mechanism the chairman has also stated to bring in the PhD scholars from various research institutes to work in DRDO laboratories on specific defence and security projects.

In the coming week, the task force will submit its first report to the government for better understanding and further action. The chairman has briefed the media that these projects in the time will discover a new horizon for our defence and security forces to meet the ongoing aspirations of the people of India.

https://www.campusvarta.com/campus-updates/government-to-collaborate-with-iit-and-iisc-to-get-futuristic-defense-technologies/

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Thu, 12 Dec 2019

Barak-8 missile: A strategically vital and lethal weapon

The Barak-8 Air and Missile Defence system or LRSAM provides a 360-degree defence against various airborne threats. Complemented by a state-of-the-art multi-mission radar, flexible control and command system, and two-way data link, Barak-8 can eng...

When indigenous missile programs "Trishul" and "Akash" failed to live up to expectations after multiple trials and amidst the growing need for long range SAMs (surface to air missiles), India partnered with Israel to create a new medium shipborne air defence missile system. The Barak-1 system, which was already in service with both Indian and Israeli navies, was chosen to be further enhanced into a superior air defense missile system.

Initially developed as a shipborne air defense missile system for navy only, it subsequently evolved into a medium range SAM for land forces. The current version is called Barak-8, which has been jointly designed and developed by Israel Aerospace Industries (IAI), India's Defence Research and Development Organisation (DRDO), Israel's Administration for the Development of Weapons and Technological Infrastructure, Rafael, Elta Systems and other companies.

1. What makes Barak-8 a standout performer?

The Barak-8 Surface-to-Air Missile Defence system or LRSAM provides a 360-degree defence against various airborne threats. Complemented by a state-of-the-art multimission radar, flexible control and command system, and two-way data link, Barak-8 can engage multiple targets at the same time during day and night in all weather conditions.

As a versatile performer, this missile can defend against any Unmanned Aerial Vehicles (UAVs), helicopters, and aircraft, anti-ship missiles, ballistic missiles, cruise missiles, and fighter jets.

2. What are the different variants of the Barak-8 system?

Currently, there are three variants of the Barak-8 system.

The first one is called Barak 8 AMD/LRSAM, which is a naval air defence system, originally designed for the Israeli Navy and currently used by other countries including India.

The second variant is called MRSAM or a medium-range, land-based missile system, which comes with a tracking radar, a command and control system, and mobile launcher systems.

The third variant is known as Barak MX, which comes with a flexible configuration option, making it useful both in naval and land missions.

3. What is the range of Barak-8 system?

The Barak-8 has an operational range of 100 km. Its advance version or Barak-8ER can neutrilise targets up to 150 km. Besides its own Barak 8 Radar, this weapon system is also supported by multi-function surveillance track and guidance radars, which enables it to hit targets with precision.

https://economictimes.indiatimes.com/news/defence/barak-8-missile-a-strategically-vital-and-lethal-weapon/articleshow/72474051.cms

DefenceNews

Thu, 12 Dec 2019

Indian Air Force looks to private sector for MRO

The Indian Air Force (IAF) is moving ahead with a plan to outsource maintenance of its aging twin-engine Antonov An-32 “Cline” transporters to the private sector. “We want to focus on war-centric capabilities and open up the sector to industry. The government has agreed to subsidize maintenance costs for the private sector,” a senior maintenance official of the IAF told AIN at the annual Aero MRO conference held in New Delhi last week.

The IAF has around 100 An-32s in its inventory, which are currently maintained by military personnel. It wants to partner with industry for the refurbishment and re-equipment of its transport aircraft. Eleven work packages have been selected, to include repainting, wing-structure modification, and ultrasonic inspection.

Initially, the air force plans to “hand-hold” MRO providers to ensure quality control requirements are met. “The Indian MRO industry is still nascent and not mature enough,” commented the IAF official. "Ultimately we would like the industry to take responsibility for certification.” He cautioned that, while some spares could be sourced in India, a reliable supply of spare parts was essential. For the past three years, IAF has been working with private manufacturers on the indigenization of components such as nuts, bolts, washers, pipelines, rubber seals, unions, joints, harnesses, filters, and electronic items.

The upgrade of the An-32s has been caught in a quagmire of geo-politics and sparring between Russia and Ukraine, resulting in delays due to the non-availability of components and spares. In June, a Request for Information for An-32 spares was released by the MoD.

On a more optimistic parallel note, AIN has learned that an An-32 will fly with a jatropha-based bio-fuel later this month as part of the IAF efforts to become more energy-efficient and environment-friendly. No changes have been made to the aircraft for the trials, which are due to take place at the airfield at Leh, one of the world's highest with an elevation of 3,256 meters (10,682 feet).

https://www.defencenews.in/article/Indian-Air-Force-Looks-To-Private-Sector-for-MRO-798404

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Thu, 12 Dec 2019

Russian Navy ships arrive in India for joint exercise INDRA 2019

The aim of exercise INDRA 2019 is to enhance interoperability and develop an understanding in order to effectively tackle common security challenges, they said. "The Russian Federation Navy (RuFN) Ships Yaroslav Mudry, Viktor Konetsky and Elyna ar...

New Delhi: Three Russian navy ships have arrived in Goa to participate in the second edition of a tri-services exercise between the armed forces of India and Russia, officials said on Wednesday.

The aim of exercise INDRA 2019 is to enhance interoperability and develop an understanding in order to effectively tackle common security challenges, they said.

"The Russian Federation Navy (RuFN) Ships Yaroslav Mudry, Viktor Konetsky and Elyna arrived at Goa on December 10 to participate in INDRA 2019, the second edition of the triservices exercise between the Indian and the Russian armed forces," the Indian defence ministry said in a statement.

The naval component of the exercise would be conducted off the coast of Goa from December 10-19.

INDRA initially began as a bilateral naval exercise between the Indian and the Russian Federation navies in 2003. The exercise has now assumed a tri-service scope with corresponding maturity and gradual increase in complexity and level of participation, it said.

"This year, the naval component of the exercise would be held in two phases. The harbour phase would be held at Goa from December 10-15 and encompass planning conferences, professional interactions, cultural visits, sports fixtures and formal calls between flag officers and senior officers of the participating navies," it said.

The sea phase of the exercise would be conducted in the Arabian Sea from December 16-19, officials said.

"The focus area for the exercise at sea would be underway replenishment, air defence drills, surface firings, visits board search and seizure (VBSS) operations and other tactical procedures, the statement said.

The Indian Navy would be represented by INS Aditya, a fleet support ship and INS Tarkash, a frontline guided missile frigate. In addition, Dornier and P8I Maritime Patrol Aircraft, MiG-29K fighter aircraft and other integral rotary wing helicopters would also participate in the exercise, it said.

The Indian Army will be fielding a Ghatak Platoon in the validation exercise on December 18, whereas an assortment of Su-30MKI and Jaguar military jets, Mi-17 helicopters and an airborne warning and control system (AWACS) aircraft will be participating from the Indian Air Force, the ministry said.

"Tri-services Ex INDRA 2019 would help further strengthen mutual confidence and interoperability and also enable sharing of best practices between the armed forces of both countries.

"The exercise will be yet another milestone in strengthening security cooperation and will serve to reinforce the long-standing bond of friendship between India and Russia," it said.

https://economictimes.indiatimes.com/news/defence/russian-navy-ships-arrive-in-india-for-joint-exercise-indra-2019/articleshow/72472737.cms

पंजाब केसरी

Thu, 12 Dec 2019

संयुक्त अभ्यास के लिए रूस के नौसैनिक पोत भारत पहुंचे

नई दिल्ली, (भाषा): भारत और रूस की सशस्त्र सेना के तीनों शाखाओं के सैन्य अभ्यास के दूसरे संस्करण में हिस्सा लेने के लिए रूसी नौसेना के तीन पोत गोवा पहुंच गए हैं। यह जानकारी बुधवार को अधिकारियों ने दी। उन्होंने कहा कि 'आईएनडीआरए 2019' सैन्य अभ्यास का उद्देश्य अंतर संचालन क्षमता को बढ़ाना और समझ विकसित करना है ताकि सुरक्षा की साझा चुनौतियों से प्रभावी तरीके से निपटा जा सके। दोनों देशों की नौसेनाओं के बीच गोवा के तट पर 10 से 19 दिसम्बर तक अभ्यास होगा। आईएनडीआरए शुरू में भारत और रूस के नौसेनाओं के बीच द्विपक्षीय नौसैनिक अभ्यास के तौर पर 2003 में शुरू हुआ। अब यह अभ्यास दोनों देशों की तीनों सेनाओं के बीच होता है। मंत्रालय ने बताया कि 18 दिसम्बर को थल सेना के अभ्यास में भारतीय थल सेना घटक प्लाटून तैनात कर रही है जबकि भारतीय वायुसेना की तरफ से अभ्यास में एसयू-30एमकेआई और जगुआर सैन्य विमान, एमआई- 17 हेलीकॉप्टर और अवाक्स विमान हिस्सा लेंगे।

DefenceNews

Thu, 12 Dec 2019

Pakistan working on its very own fifth generation stealth fighter jet program

Top of the line stealth fighter jets like F-22 Raptors, F35 Lightning II, and Chengdu J-20 is a dream addition to the arsenal of any country. Pakistan hopes to follow the footsteps of highly advanced Air Forces globally. Pakistan is working on having its very own Fifth Generation Stealth Fighter Jet program, under the highly ambitious Project Azm that started back in 2017.

The aim of Pakistan is to keep up with the rapid advancements in the defense and avionics industry around the world. In the project, advanced weapon systems and MALE UAVs will be developed as well.

Pakistan Ministry of Defence Production's (MoDP) yearbook 2017-2018 revealed that the Aviation Research, Innovation, and Development (AvRID) Secretariat has completed the first of four cycles of the conceptual design phase.

"The first configuration that was designed based on the challenging performance requirements of PAF will go through three more cycles within the conceptual design using higher fidelity analysis tools and codes."

Jane's Defense Weekly, Air Chief Marshal Mujahid Anwar Khan in an interview said that he does not expect the stealth jet to be functional for another decade. The concept of the 5th generation fighter jet initially appeared in tail art form on PAF's C-130B, participating in RIAT 2019.

This jet will be a successor to F-16A/B Block-15s, Mirage III and Mirage 5 with improved range and payload carrying capacity in comparison to JF-17 Thunder jets and 'optimized for offensive counter-air (OCA), maritime, and deep-strike platforms'.

According to the Air Staff Requirements (ASR) it is a "twin-engine single-seater, boasting the likes of super-cruise and laser weapons (directed energy weapons)."

As per some reports China might also share its Chengdu J-22 technology with Pakistan. However, this is just rumor as of now with no substance.

https://www.defencenews.in/article/Pakistan-Working-on-its-very-own-Fifth-Generation-Stealth-Fighter-Jet-program-798407

THE HINDU

Thu, 12 Dec 2019

50th PSLV launch carries radar satellite

RISAT-2BR1 will be used for national security

By T.K. Rohit

Sriharikota: India's Polar Satellite Launch Vehicle (PSLV) marked its 'Golden Jubilee' launch on Wednesday by injecting India's advanced radar imaging satellite RISAT-2BR1 and 9 other customer satellites from Japan, Italy, Israel and the U.S.A. into their intended orbits.

The PSLV, which has a history of successful launches of payloads that include Chandrayaan-1, Mars Orbiter Mission and the space recovery mission, soared into clear blue skies at 3.25 p.m. from the refurbished first launchpad, marking the 50th launch for the vehicle.

"Today's launch was a historical mission," ISRO Chairman K. Sivan, said from Mission Control after the successful launch.

"We also achieved a major milestone of 75 launches from our spaceport today. Initially, the PSLV had a carrying capacity of 850 kg, and over the years it has been enhanced to 1.9 tonnes. The PSLV is very versatile having various mission options," Mr. Sivan added.

The PSLV had helped take payloads into almost all the orbits in space including Geo-Stationary Transfer Orbit (GTO), the Moon, Mars and would soon be launching a mission to the Sun, the ISRO chief noted.

Mr. Sivan observed that in the last 26 years, the PSLV had lifted more than 52 tonnes into space, of which about 17% were for commercial customers. "Clearly, this vehicle has done wonders," he said, while commending the work of all the scientists who had built the workhorse vehicle from ground up and brought it to its current status. He also released a book commemorating the 50 launches and the scientists involved in them.

The PSLV has failed only twice in its history — the maiden flight of the PSLV D1 in September 1993 and the PSLV C-39 in August 2017.

S. Somanath, Director, Vikram Sarabhai Space Centre said while it had taken ISRO 26 years to achieve 50 launches, the next 50 would likely be done in the coming five years.

The RISAT-2BR1 will be used for agriculture, forestry, disaster management support and national security. ISRO will launch the next version of RISAT within the next two months, said P. Kunhikrishnan, Director, UR Rao Satellite Centre (URSC).

https://www.thehindu.com/sci-tech/science/pslv-c48-carrying-risat-2br1-lifts-off-from-sriharikota/article30276126.ece

the pioneer

Thu, 12 Dec 2019

PSLV strikes gold, touches 50th mission milestone: ISRO

Sriharikota: The PSLV, often hailed as a trusted workhorse, touched a new milestone of its 50th mission on Wednesday when it placed earth observation satellite RISAT-2BR1 and nine other foreign satellites in orbit, ISRO chairman K Sivan said here.

The space agency head, hailing the versatility and unbeatable performance of the PSLV for over the past two decades, lauded its 50th mission as "historical."

"I am extremely happy to declare the 50th PSLV vehicle, C48 successfully injected RISAT-2BR1 and nine customer satellites precisely into the 576 km orbit," he said.

Tracing the journey of PSLV, which has five variants, he said the payload capacity was initially about 860 kg and it went up to 1.9 tonnes subsequently.

- "I am extremely happy to declare the 50th PSLV vehicle, C48 successfully injected RISAT-2BR1 and nine customer satellites precisely into the 576 km orbit," ISRO chairman K Sivan said
- Sivan recalled and lauded the contributions of the past and present leadership behind PSLV's successful journey in its eventful history of 26 years
- Sivan said PSLV has gone 'all over space', placing satellites in orbits, including polar and the trusted vehicle was behind Chandrayaan 1 and the Mars Orbiter Mission
- "Now we are going to send a satellite to the sun's orbit", he said, adding that ISRO was looking at more launches next year with PSLV

It has lifted 52.7 tonnes to space, of which 17 per cent corresponded to customer satellites, he said.

This mission was special for another reason as well, since it marked another major milestone which was "the 75th launch from spaceport of India," the Satish Dhawan Space Centre at Sriharikota, he noted.

Sivan recalled and lauded the contributions of the past and present leadership behind PSLV's successful journey in its eventful history of 26 years.

Dubbing the PSLV a "wonderful vehicle," he said Dr Srinivasan conceptualised and configured it, while G Madhavan Nair made it operational.

Also, there were a whole lot of others, including R V Perumal,Ramakrishnan and George Koshy,whose rich contributions propelled the PSLV to great heights, he said.

The ISRO chief said RISAT-2BR1, though a very advanced and complex satellite, was built in a short time and congratulated the team for its good work.

"Definitely, we have had many successes. At the same time, we have a large number of missions to do. I am sure team ISRO as usual will rise to the occasion and make every mission a grand success," he said amid loud applause.

Sivan said PSLV has gone 'all over space', placing satellites in orbits, including polar and the trusted vehicle was behind Chandrayaan 1 and the Mars Orbiter Mission.

"Now we are going to send a satellite to the sun's orbit", he said, adding that ISRO was looking at more launches next year with PSLV.

“Next year we have a series of PSLV missions. We also have GSLV launches. Then we also have the maiden mission of SSLV (Small Satellite Launch vehicle) next year. Like that many missions lined up for next year”, the ISRO Chief said.

Director, Vikram Sarabhai Space Centre, S Somanath hailed the 50th mission, saying “PSLV has hit gold today.”

In commemoration of the milestone event, a book, “PSLV- 50,” chronicling the various missions, the satellites and the leaders behind it was released by Sivan.

https://www.dailypioneer.com/2019/india/pslv-strikes-gold--touches-50th-mission-milestone--isro.html

दैनिक जागरण

Thu, 12 Dec 2019

रक्षा उपग्रह की लांचिंग संग पीएसएलवी का अर्धशतक

श्रीहरिकोटा, प्रेट्र: भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने बुधवार को दोहरी उपलब्धि हासिल की। इसरो के सबसे कामकाजी कहे जाने वाले रॉकेट पोलर सेटेलाइट लांच व्हीकल (पीएसएलवी) ने एक महत्वपूर्ण रक्षा उपग्रह की लांचिंग के साथ अपनी 50वीं उड़ान पूरी कर ली है। इस दौरान पीएसएलवी ने नौ विदेशी सेटेलाइट को भी कक्षा में स्थापित किया।

पीएसएलवी ने दोपहर 3:25 बजे श्रीहरिकोटा स्थित सतीश धवन अंतरिक्ष केंद्र से उड़ान भरी। लांचिंग के 16 मिनट बाद इसने रक्षा उपग्रह रीसैट-2बीआर1 को 576 किमी ऊंची कक्षा में स्थापित कर दिया। यह सेटेलाइट सीमाओं की निगरानी में विशेषरूप से मददगार होगा। रीसैट-2बीआर1 को स्थापित करने के पांच मिनट के भीतर पीएसएलवी ने नौ विदेशी सेटेलाइट को भी उनकी संबंधित कक्षाओं में पहुंचा दिया। 10 सेटेलाइट को सफलतापूर्वक कक्षा में स्थापित करने के बाद इसरो प्रमुख के. सिवन और अन्य वैज्ञानिकों ने एक-दूसरे को बधाई दी। यह पीएसएलवी की 50वीं उड़ान थी और सतीश धवन अंतरिक्ष केंद्र से कुल 75वीं उड़ान थी। सिवन ने पीएसएलवी के विकास में अहम भूमिका निभाने वाले डॉ. श्रीनिवासन, डॉ. माधवन नायर और अन्य अग्रणी लोगों का आभार जताया। उन्होंने इस बात का भी विशेष उल्लेख किया कि डॉ. नायर ने ही पीएसएलवी को परिचालन के लायक बनाया था। सिवन ने रीसैट-2बीआर1 तैयार करने वाली टीम की भी सराहना की।

आंध्र प्रदेश के श्रीहरिकोटा में रडार इमेजिंग पृथ्वी निगरानी उपग्रह रीसैट-2बीआर1 और नौ विदेशी उपग्रहों को पीएसएलवी-सी48 के साथ सफलतापूर्वक प्रक्षेपित किया गया • प्रेट्र

पीएसएलवी का सफर

पीएसएलवी ने सितंबर, 1993 में पहली उड़ान भरी थी। इसकी कुल 50 उड़ानों में से 48 सफल रही हैं। शुरुआत में पीएसएलवी रॉकेट की पेलोड क्षमता 860 किलोग्राम थी, मतलब यह 860 किलोग्राम तक के सेटेलाइट लेकर अंतरिक्ष में जा सकता था। अब पेलोड क्षमता 1.9 टन है। पीएसएलवी ने अब तक 310 विदेशी सेटेलाइट स्थापित किए हैं। 2008 में चंद्रयान-1 की लांचिंग और एक साथ 104 सेटेलाइट को विभिन्न कक्षाओं में स्थापित करने जैसी उपलब्धियां इसके खाते में हैं।

खास है रीसैट-2बीआर1

यह रीसैट (रडार इमेजिंग सेटेलाइट) सिरीज का चौथा सेटेलाइट है। रीसैट सिरीज के तहत इसरो ने ऐसे सेटेलाइट लांच किए हैं, जो हर मौसम में निगरानी करने में सक्षम हैं। रीसैट-2बीआर1 पूरी तरह स्वदेश निर्मित उपग्रह है, जिसे इसरो ने ही विकसित किया है। इसकी मदद से सीमाओं की निगरानी सुदृढ़ हो सकेगी। रक्षा कार्यों के अलावा कृषि, वानिकी और आपदा प्रबंधन में भी इससे मदद मिलेगी।

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Thu, 12 Dec 2019

Second emotion sensing robot headed for space

The spherical droid will join astronauts in the International Space station to assist them

An intelligent robot equipped with emotion-sensing voice detectors headed to the International Space Station after launching from Florida recently, becoming the latest artificial intelligence-powered astronaut workmate in orbit.

The Crew Interactive Mobile Companion 2, or CIMON 2, is a spherical droid with microphones, cameras and a slew of software to enable emotion recognition. The droid was among 2,585 kg of supplies and experiments aboard SpaceX's Falcon 9 rocket.

Social robot

"The overall goal is to create a true companion. The relationship between an astronaut and CIMON is really important," Matthias Biniok, the lead architect for CIMON 2, told Reuters. "It's trying to understand if the astronaut is sad, is he angry, joyful and so on," he said. Based on algorithms built by IT giant IBM Corp and data from CIMON 1, a nearly identical prototype that launched in 2018, CIMON 2 will be more sociable with crew members.

Mitigate groupthink

While designed to help astronauts conduct scientific experiments, the English-speaking robot is also being trained to help mitigate groupthink — a behavioural phenomenon in which isolated groups of humans can be driven to make irrational decisions.

"Group-thinking is really dangerous," Biniok said. In times of conflict or disagreement among astronauts, one of CIMON's most important purposes would be to serve as "an objective outsider that you can talk to if you're alone, or could help let the group collaborate again," he said.

Sci-fi inspiration

Engineers have said CIMON's concept was inspired by a 1940s science fiction comic series set in space, where a sentient, brain-shaped robot named Professor Simon mentors an astronaut named Captain Future. CIMON 2 also parallels HAL, the sentient computer in Stanley Kubrick's *2001: A Space Odyssey* film•

– Reuters

CIMON 2 will test technologies that could prove crucial for future crewed missions in deep space, where long-term isolation and communication lags to Earth pose risks to astronauts' mental health

पंजाब केसरी

Thu, 12 Dec 2019

पूरी तरह से बिजली से चलने वाले पहले विमान ने कनाडा में भरी उड़ान

वैंकुवर, (एएफपी) : पूरी तरह से बिजली से चलने वाले दुनिया के पहले वाणिज्यिक विमान ने मंगलवार को परीक्षण के तौर पर वैंकुवर से उड़ान भरी। इस क्षेत्र में प्रशांत महासागर के किनारे ऊंची-ऊंची पर्वत चोटियां हैं। सियेटल की इंजीनियरिंग कंपनी मैग्निक्स के मुख्य कार्यकारी रोई गनजार्स्की ने बताया, ''इससे यह साबित होता है कि पूरी तरह से बिजली से चलने वाला वाणिज्यिक विमान काम कर सकता है।'''' इस कंपनी ने विमान की मोटर का डिजाइन तैयार किया है और हार्बर एयर के साथ साझेदारी में काम किया है।