



e-news

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Publisher

Journal of Aerospace Sciences and Technologies
Aeronautical Society of India
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Advertisement - Tariff

A4 - 1 Full Page : Rs. 1000

A4 - 1/2 half Page : Rs. 500

Draft Drawn in Favour of
"Journal Office, The Aeronautical Society of India" Payable at Bangalore

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Welcome to e-news



Now, Brahmos missile turns stealth fighter with precision - Details under Technology

READER'S RESPONSE

The editorial team invites your views, suggestions, to the News about Members Column and contributions to the e-news.

Saras aircraft project work will continue: CSIR

The Council of Scientific and Industrial Research (CSIR) would go ahead with its project to develop the 14-seater Saras aircraft despite the crash of the second prototype of the aircraft near Bangalore. "We will continue with the project. We will not let the sacrifice made by the three crew members of the aircraft, who belonged to the Indian Air Force's Airborne Systems Testing Institute, to go in vain," said CSIR Director-General Samir K. Brahmachari. He told The Hindu that the first prototype of the aircraft would be modified and converted into prototype-3 and the scientists would carry forward the various tests required for certification by the Directorate-General of Civil Aviation. Dr. Brahmachari, who visited Bangalore after the accident to take stock of the situation, said he had held discussions with the officers of the IAF and civil aviation authorities on the follow-up actions. The prototype-1 has completed around 160 test flights and the prototype-2 was on its 49th test flight when it crashed.

Source: Hindu

Saras crashes near Bidadi, three IAF officers killed

A Saras Prototype II, an indigenously developed multi-role transport aircraft, which was on a test flight, crashed near Bidadi, 30 km from here, killing three Indian Air Force officers. The reason for the crash is yet to be ascertained. Designed and developed by National Aerospace Laboratory (NAL), the aircraft took off from HAL Airport at 2.55 p.m. before coming down around 3.30 p.m. near Seshagiri halli off Bangalore-Mysore Highway. Pilot Wing Commander K. Praveen, co-pilot Wing Commander D.K. Shah and flight test engineer Squadron Leader S. Ilyaraj were charred to death as the aircraft burst into flames soon after it crashed in an open field, a few hundred meters away from Seshagiri halli colony that has around 100 houses. According to NAL officials, the aircraft lost contact with the Air Traffic Control (ATC) at 3.30 p.m. It was on a routine test flight, officials said. Sources said that such sorties were done twice a day and the aircraft took the same route for its training sorties.

Source: Hindu

Leaner DRDO in 3 years likely

India will attempt to transform its Defence Research and Development Organisation (DRDO) over the next three years by consolidating around 50 research labs into fewer centres and moving towards more collaborative development with private sector companies. The aim is to model DRDO on the lines of globally successful defence labs in other countries including the US, France, Britain and Israel. "The government has given 'in-principle' approval to form

an implementation committee for restructuring DRDO based on the Rama Rao Committee's recommendations," said a defence ministry official familiar with the decision. He requested anonymity. The implementation committee being constituted by the government will try and transform DRDO into a leaner organisation, and also consolidate over 50 of its research labs into fewer (seven or eight) labs focusing on broader segments of aeronautics, combat systems, naval systems, weapons systems and electronic warfare.

Source: Economic Times

IAF gets its first DG, operations

To bring all air operations under one umbrella, IAF got a new post of Director-General Operations (DGO) on the lines of the Army's DGMO. Air Marshal D C Kumaria, a fighter pilot who has extensively worked on IAF's air power doctrine, assumed charge of the new appointment at Air HQ. Apart from being the nerve-centre of IAF operations across the country, the DGO will also coordinate all activities of the force as far as space is concerned. Incidentally, all the three services as well as the integrated defence staff have established "space cells" within their organizations. Though there is disquiet among the top Indian military brass over China's deadly counterspace military programme, with "direct-ascent" ASAT (Anti-Satellite) Missiles, hit-to-kill "kinetic" and directed energy laser weapons, the government is yet to clear a full-fledged Tri-Service Aerospace Command.

Source: Times of India

ISRO chief wants women to turn astronauts

Women employees of Indian Space Research Organisation (ISRO) should aspire to become astronauts and try to scale remarkable heights in their career, ISRO Chairman G. Madhavan Nair has said. Inaugurating the national conference on 'ISRO women: challenges ahead', Mr. Madhavan Nair said the women personnel in the organisation had been consistent in their output and were capable of making remarkable strides and taking up more challenges. Mr. Madhavan Nair said that during the course of a series of interactions he had with students and the probing questions they posed about space technology, it was obvious that they held a promise to the future. Chandrayaan had won great acclaim and the nation earned a place of pride in satellite technology. There were challenges ahead and the flight should go on to Mars, meteors and the edge of the solar system. An uninterrupted access to the space was the key to all development.

Source: Hindu

Universities to breed brains for ISRO

With a number of indigenous space projects lined up in the near future, Indian Space Research Organisation (ISRO) is on the lookout for nurturing youngsters in space science at universities across the country. ISRO's Advisory Committee for Space Sciences (ADCOS), through its Space Science Promotion scheme, has selected eight universities where space science will be nurtured. The universities that are selected under the scheme are Andhra University, Banaras Hindu University, Bangalore University, Calcutta University, Dibrugarh University, Mysore University, Sri Venkateswara University and Tezpur University. To start with, we have short-listed a few universities for nurturing space science related activities.

Source: Indian Express

Direct hit for LCA in first test sortie

The indigenously developed Light Combat Aircraft (LCA), 'Tejas', was bang on target in the first test sortie flown as part of the second phase of its weapon testing. The tests are currently under way at an Air Force base in the north-western sector, according to the Defence Research and Development Organisation (DRDO). A statement from the DRDO said the focus of the current phase of the two-week testing was on safe separation and accuracy of weapon delivery. The results from the tests would validate the aerodynamic interference data as well as the complex weapon release algorithms in different modes of release. A composite test team comprising specialists from ADA, IAF, HAL, NAL, ADE, DGAQA and CEMILAC has been deployed at the trial location where the flight test is being conducted by the National Flight Test Centre.

Source: Deccan Herald

Two more Indians join 'galaxy'

Two recently discovered asteroids will now be known by the names of eminent Indian scientists: Prof MGK Menon and Prof JC Bhattacharya. The Committee for Small Body Nomenclature (CSBN) of the International Astronomical Union (IAU) recently named two of the six asteroids discovered from the Vainu Bappu Observatory in Kavalur, after the two men of science. Asteroids "Gokumenon" and "Bhattacharyya" now join (4130) Ramanujan 1988 DQ1, (2596) Vainu Bappu 1979 KN, (2986) Mrinalini 2525 P-L and (2987) Sarabhai 4583 P-L in the sky. In January 1987, when Prof Bhattacharyya was the Director of the Indian Institute of Astrophysics (IIA) and Prof Menon the Chairman of its Governing Council, the IIA had launched 'Project Kalki' to survey and discover asteroids, comets and the elusive tenth planet of the Solar

System. A 45-cm Schmidt telescope at the Vainu Bappu Observatory at Kavalur was used for the survey. During the few years that Project Kalki was in operation, it discovered a total of six asteroids.

Source: Deccan Herald

IAF bids adieu to MiG-23

The last of the original swing-wingers of Indian sky, MiG-23, is all set to fly into the sunset. After flying the MiG-23s for almost two and half decades, Indian Air Force pilots from the 221-squadron will make their final sortie in front of the IAF chief Air Marshal Fali Homi Major and other IAF officials at Halwara, near Ludhiana. The farewell-ceremony will mark the end of MiG-23's celebrated journey which includes milestone like Operation Meghdoot (occupying the heights in Siachen glacier) and Operation Safed Sagar (providing air-support during the Kargil conflict). Inducted in the service in 1981, MiG-23 had two versions for two tasks. While the MF version was for air-defence and had a specific radar system for defence, the BN variety was optimised for ground attack. Unlike other fighter planes with fixed wings, MiG-23 wings could swing giving the flying machine the sobriquet of "swing-wingers". The final batch of MiG-23 (MF) retired from Jamnagar base in 2007.

Source: Deccan Herald

China's lunar probe lands on Moon

Chang'e-1, China's first lunar probe, impacted the Moon at 4:13 p.m. Beijing Time (0813 GMT), said sources with the State Administration of Science, Technology and Industry for National Defence. The satellite ended its 16-month mission when it hit the lunar surface at 1.50 degrees south latitude and 52.36 degrees east longitude. Chang'e-1 began to reduce its speed at 3:36 p.m. Beijing Time under control by two observation and control stations in east China's Qingdao and northwest China's Kashi. This was the first phase of China's three-stage moon mission, which will lead to a landing and launch of a rover vehicle around 2012. Chang'e-1 was launched into space on October 24, 2007 and sent the first full map of the Moon's surface back to China one month later. A dozen performance tests were carried out while Chang'e-1 was in orbit to find out its orbit adjustment capability. "Chang'e" is named after a legendary Chinese Moon goddess.

Source: Hindu

NAL plans to manufacture regional transport aircraft

National Aerospace Laboratories (NAL) proposes to make 'regional transport aircraft' with 70 to 90 seats in public-private partnership mode. It is talking to almost all engine manufacturers for partnership. The Government of India (GoI) is willing to support the programme, according to A.R. Upadhyay, Director, NAL. "While most of the aircraft will be manufactured with indigenous parts, the engines will be imported and joint-ventures and partnerships will be floated for a few other parts," he said. Dr. Upadhyay participated in an international seminar on manufacture of composite material organised by Fibreglass Industries Association of Andhra Pradesh here on Friday. A market survey indicated that there was a demand for 240-250 aircraft on the civil side and about 150 on the military side. The programme would bring down the manufacturing, acquisition and maintenance costs by 20-25 per cent.

Source: Hindu

Indigenous LCA engine ready for maiden trial

After two decades of copious criticism from every quarter, the indigenous Kaveri engine is ready for its maiden flight trial in 2010. "We have completed all ground testing for the full engine and individual components. The first flight (in a light combat aircraft) is expected in early 2010," T Mohana Rao, director of the Gas Turbine Research Establishment (GTRE), Bangalore, which is developing the engine, told Deccan Herald. Way back in 1986, the Defence Ministry wanted to develop an indigenous gas turbine engine for the indigenous fighter, Light Combat Aircraft (LCA), which just got off from the drawing board. The decision led to the Kaveri programme, which was sanctioned in 1989 with an initial funding support of Rs 382.81 crore.

Source: Deccan Herald

Helicopters to get separate corridors for landing

After the recent security breach involving helicopters of President Pratibha Devisingh Patil's entourage and a domestic aircraft, the Civil aviation ministry has decided to build separate corridors at airports for helicopter landing in four major cities - Delhi, Mumbai, Chennai and Bangalore. Once these are operational, other cities and airports could also have such a facility. "The Director General Civil Aviation (DGCA) had ordered an investigation into the incident under rule 77 and appointed the joint DGCA as the enquiry officer. After going through all the aspects and the movement of the helicopters, the ministry has decided to create separate corridors at least in four major metros to start with," a senior civil aviation ministry official, said.

Source: Economic Times

BrahMos II to be ready by 2013

The Indo-Russian joint venture, BrahMos Aerospace, is working on a project to develop the hypersonic cruise missile 'BrahMos II', whose speed will be five times that of sound. "The hypersonic missile will be ready by 2013," said A Sivathanu Pillai, CEO and MD of BrahMos. Pillai had a brief chat with reporters on the sidelines of a function at the Vishwakarma Institute of Technology (VIT) where he delivered a guest lecture on 'Empowering India for Global Leadership'. The occasion was VIT's annual tech fest 'Vitality 2009'. Pillai, who is also chief controller of research and development (R&D) at the DRDO, said, "BrahMos II will have a speed in the range of Mach 5 to 7, which is far ahead of the existing cruise missiles." He said, "The project has been undertaken in anticipation of the emerging defence systems for the BrahMos supersonic cruise missiles."

Source: Times of India

Ballistic missiles programme on course: DRDO

The Defence Research and Development Organisation (DRDO) on Monday said the plans to develop the country's ballistic missile programme remained on course and expressed confidence of completing the first phase by 2010. Having successfully flight tested the third ballistic missile interceptor at the integrated test range, Chief Controller (Missiles Strategic Systems) and Programme Director (Air Defence), V.K. Saraswat said two more tests would have to be conducted before the programme would be completed latest by 2011. "The third consecutive interception of ballistic missile demonstrated the robustness of the Indian BMD system. The DRDO have already conducted two interception trials, first in exo-atmospheric region at 48 km altitude on November 27, 2006 and the second in endo-atmospheric region at 15 km using AAD missile on December 6, 2007," he said. Dr. Saraswat, who briefed journalists here, said the integrated endo-atmospheric and exo-atmospheric tests were expected to be conducted by the end of this year.

Source: Hindu

Interceptor does it again

It was a hat-trick for the Defence Research and Development Organisation (DRDO). In a third successful mission, it proved that India could shield itself against ballistic missiles from enemy countries by successfully testing an interceptor missile from the Wheeler Island off the Orissa coast. The interceptor shot down a Dhanush missile heading towards the island. The interception took place at an altitude of 80 km over the Bay of Bengal. The Dhanush missile was destroyed in its path in both a direct-hit and detonation of the warhead of the interceptor, which is an advanced Prithvi missile.

Dhanush was simulating the trajectory of ballistic missiles with a range of 1,500 km, similar to Pakistan's Ghauri. The previous successful missions took place on November 27, 2006 and December 6, 2007, when incoming "enemy" ballistic missiles were destroyed in direct-hits at an altitude of 48 km and 15 km respectively. V.K. Saraswat, Programme Director, Air Defence, called success "a major milestone in the direction of proving the capability of our ballistic missile defence (BMD) shield."

Source: *Hindu*

India urgently needs to improve its airspace management

The recent 'near miss' at Mumbai airport involving the fleet of helicopters flying the president of India and her party speaks poorly of the management of national air space. The ensuing public spat between the minister of civil aviation and the chief of air staff underscores the view that air space management, like so many other issues of governance, is a victim of turf wars. This was evident in the reported statement of the minister to the effect that his ministry did not enjoy a perfect relationship with the Indian air force and that better coordination was needed. For the public and, more specifically, the aviation fraternity, such an admission must surely ring alarm bells. Who would want to fly in air space that is poorly managed? At the time of writing, the 'near miss' is still under investigation. But one thing is intriguing. What happened to the earlier rule that required closure of air traffic for a specified time both before and after VVIP movement? Had this still been in place, an error by anyone involved would not have compromised the safety of the president.

Source: *Telegraph*

Chandrayaan likely to join U.S. spacecraft for water probe

If things go well, India's Chandrayaan-1 probe could be joining forces with two U.S. spacecraft to be launched later this year in looking for water on the Moon. The National Aeronautics and Space Administration plans to launch the Lunar Reconnaissance Orbiter (LRO) as well as the Lunar Crater Observation and Sensing Satellite (LCROSS) on an Atlas V rocket from the Kennedy Space Center in Florida. NASA's LRO web site indicates that the launch is currently scheduled to take place no earlier than May 20. Whether or not water in the form of ice has accumulated in craters at the lunar poles remains an unsettled and controversial issue. One of the instruments on Chandrayaan-1, which is currently circling the Moon, is a compact imaging radar known as Mini-SAR. The radar was specifically developed by a team of U.S. scientists to look for signs of water-ice at the bottom of lunar craters that are permanently in shadow. A similar sort of

radar, called Mini-RF, is flying on the LRO as well.

Source: *Hindu*

India may send man to moon by 2020

Investments in space programmes is profitable to the country since "every rupee spent is returned to the country as Rs 1.50," Indian Space Research Organisation (ISRO) chairman, Dr G Madhavan Nair said. He was delivering the T M Shrinagesh Memorial lecture organised by Bangalore Management Association and Hindustan Aeronautics Limited (HAL) in Bangalore recently Madhavan Nair said the country would be able to send a man to moon only by the year 2020 and space by 2015. "A man capsule, which can accommodate three passengers, is being developed for this and it is at the conceptual stage. It would be ready within six years. It is 1.2 meters in diameter and weighs 2.6 tonnes." he said

Source: *Times of India*

Now, Brahmos missile turns stealth fighter with precision

The successful test of an advanced version of Brahmos cruise missile, provides India with the capability of precisely striking a specific target at a distance of 290 km, evading the enemy radar. In the presence of several senior army officials including Lt Gen A S Sekhon, director general military operations, the missile took off successfully from its launch pad in Pokhara at 11:15 am and hit the desired target at the bull's eye, meeting all mission parameters. "It was a fantastic launch. Launch profile, trajectory and other parameters were perfect. Brahmos block-II is ready for induction in the army," A Sivathanu Pillai, chief executive officer of Brahmos Aerospace - an Indo-Russian joint venture that makes the missile - told Deccan Herald. This is an improved version of Brahmos block-I that was inducted in the army two years ago. Currently, the army has one regiment armed with the block-I missile. While block-I could not zero in on specific targets, block-II version was capable of striking a specific building among a row of buildings, said Pillai who is also one of the chief controllers at the Defence Research and Development Organisation. The missile has an enhanced capability to select a particular land target amongst a group of targets. Brahmos chief, however, refused to disclose what could be the smallest object for the block-II version to pick up.

Source: *Deccan herald*

Commercial planes may soon fly on biofuels

Biofuels could be used to fly commercial airlines within the next decade as a viable alternative to kerosene, although costs and concerns over environmental impact remain big barriers. Airlines including Virgin Atlantic, Continental, Air New Zealand and Japan Airlines have already flown on routes with one engine part-powered by a range of biofuels including algae and Jatropha, a poisonous plant that produces seeds that can be refined into biofuels, is being touted as a good alternative fuel and a potentially powerful weapon against climate change. Experts say the perennial plant can grow on marginal land with limited rainfall, and does not compete with other food crops or encourage deforestation. Following its flight using Jatropha in late December, Air New Zealand has set a goal to have 10% of fuel coming from biofuel sources by 2013, while Virgin Atlantic is aiming for 5% by 2015.

Source: *Economic Times*

CSM Software & BEML Limited Sign Strategic MoU

CSM Software Pvt. Ltd., a leading engineering services company and BEML Limited, a Mini-Ratna Category-1 Public Sector Undertaking under the Ministry of Defence, Govt. of India, announced the signing of a strategic MoU during the AeroIndia show 2009. The objective of this MoU is to establish a framework for the execution of the engineering services orders likely to be received by BEML through CSM's sales and marketing efforts, under the defence offset clause, and to ensure total customer satisfaction. The Indian offset policy states that, for any Indian defence contract worth Rs. 3000 million or more there will be an offset liability to the extent of 30 to 50 % of the order value. The size of this offset market is estimated to be around USD 12 Billion over the next 5 – 7 years. BEML, as a Defence PSU, is eligible to receive these orders against this Offset Policy and this represents a huge market opportunity to this partnership. CSM Software, with its strong foothold in the global engineering services domain and with its existing customer base in the aerospace market will use this framework to expand its current relationships to help its customers fulfill their offset obligations.

Source: *Business Wire India*

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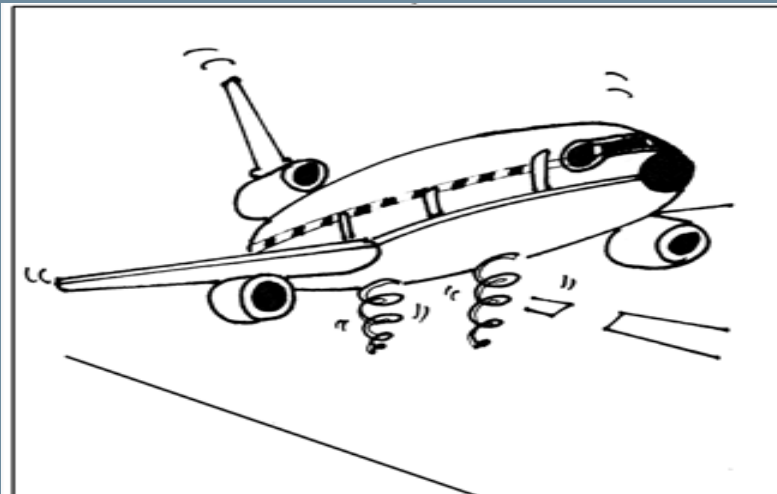
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