



## e-news

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## Welcome to e-news

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**60<sup>th</sup> Year**

**THE AERONAUTICAL SOCIETY OF INDIA**

**AERO INDIA 2009 International Seminar**  
 on  
**Aerospace - Perspectives and Trends in Technologies**

**Special Issue**

**A QUARTERLY JOURNAL FROM THE AERONAUTICAL SOCIETY OF INDIA**

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**Special Issue published on the completion of the 60th year of The Aeronautical Society of India coinciding with Aero India 2009 International Seminar**

## READER'S RESPONSE

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

## Now, ISRO's bullet-proof vests

Basking in the glory of Chandrayaan-1, the Indian Space Research Organisation (ISRO) is now planning to do its bit in fighting terror... The space agency will develop world class bullet-proof armours by the end of this year. The jackets will cost 1/8th to 1/10th of the cost of the imported ones. "After the Mumbai terror strikes, there was talk about sub-standard bullet proof jackets. In ISRO, we have great facilities which could be used to develop body armours. So we thought why not," Dr T G K Murthy, director of Atmospheric Science Programme, ISRO told Deccan Herald. Dr Murthy was in the capital to attend a technical seminar on internal security. The project will be a joint venture between the ISRO and the International Advanced Research Centre for Powder Metallurgy and New Materials of the Department of Science and Technology.

Source: Deccan Herald

## Boeing, BEL to set up analysis centre

Boeing signed a memorandum of understanding with Bharat Electronics Ltd. (BEL) to establish a centre in India to enable Indian defence forces to make "informed decisions" while modernising Indian defence capability. Vivek Lall, Vice-President, and Country Head, Integrated Defence Systems, The Boeing Company, said the first centre was to be established in Bangalore, staffed mainly by Indians. He said the analysis and experimentation centre, with simulation capability, would enable Indian defence forces to plan their defence purchases in the long run avoiding redundancies. Dinesh Keskar, recently appointed Boeing India President, said Boeing expected the Indian civil aviation market to reach about \$105 billion in the next 20 years. The market for Integrated Defence Systems was likely to touch \$31 billion in the next ten years, he added.

Source: Hindu

## Form apex defence agency: Air Chief

Chief of Air Staff, Air Chief Marshal F H Major on Monday called for the creation of an apex agency to coordinate the different sectors of defence units, to cut down on what he termed wasteful expenditure. Speaking at the inauguration of an international seminar, 'Aerospace - Perspectives and Trends in Technologies' at the Jnana Jyothi Convention Centre, the Air Chief said, "India's economic upswing in the last two decades has resulted in substantial growth in aerospace industries. Though this is encouraging, the industry is unregulated." Stressing the need to maintain a capable aerospace deterrent, Major said, "We are located in a turbulent neighbourhood. Stability can only be ensured by display of power. We therefore

need to demonstrate credible aerospace capability to protect our assets and interests. This requires us to effectively employ modern aerospace technology. The Indian Air Force must have the ability to conduct operations across the entire spectrum of conflict." The Air Chief said that the IAF has embarked upon a very focussed modernisation programme, but is handicapped - perhaps by the absence of a strong indigenous aerospace industry.

Source: Deccan Herald

## We still import 70% of our requirement

Defence Minister A K Antony ruled that the country is still dependent on foreign vendors for 70 per cent of its defence requirements, despite claiming to have the world's fourth largest scientific community. At the inaugural address of the Aero India 2009 International Seminar here, he said, "Though India is among the few nations that possess the capacity to develop, test, manufacture and operate aircraft, it is still far behind in realising the dream of the first Prime Minister Jawaharlal Nehru, whose goal was to establish self-reliance in the defence sector. "Our PSUs (Public Sector Units) are producing only 30 per cent of our needs. I feel sorry and sometimes even guilty when we see slow growth in self-reliance. This is not suitable for us. I don't visualise a day when we can have zero imports. But depending on other countries for 70 per cent of our defence needs is not acceptable. We are not spending enough on research and development either. Only six per cent of our defence budget is spent on research and development," he lamented.

Source: Deccan Herald

## BrahMos to get GPS data from Russian satellites

Stunned by the recent failure of its BrahMos army version missile test, the Indo-Russian JV project has decided to reduce its reliance on the established US satellites and depend more on the eight Global Navigation Satellite System (Glonass) Russian navigation satellites, to obtain critical GPS data. The project's support from the US navigation satellites had come under a cloud, after a preliminary test failure study revealed that the space machines up there had apparently blinked. During the failed test, the missile's GPS system could not link its onboard computers with hovering satellites. This eventually crippled its guidance system, and the mission objectives were not achieved. The missile had apparently performed the flight plan but missed the target. It was fitted with an advance seeker which was to home in on the target using GPS data obtained through the US satellites.

Source: Deccan Herald

## A first: 2 satellites collide in space

Two massive communications satellites collided in the first-ever crash of its kind in orbit, shooting out a pair of huge debris clouds and posing a slight risk to the International Space Station. NASA said it will take weeks to determine the full magnitude of the crash, which occurred nearly 800 km over Siberia on Tuesday. The collision involved a US Iridium commercial satellite, which was launched in 1997, and a defunct Russian satellite, Cosmos 2251, launched in 1993. The Russian satellite was out of control, said Mark Matney, an orbital debris scientist at Johnson Space Center in Houston. The Iridium satellite weighed 560 kg, and the Russian craft nearly a ton. No one has any idea yet how many pieces were generated or how big they might be. "Right now, they're definitely counting dozens," Matney said. "I'd suspect they'll be counting hundreds when the counting is done." "We knew this was going to happen eventually," he said. NASA believes any risk to the space station and its three astronauts is low.

Source: *Times of India*

### DRDO's robots to handle explosives

This remote operated vehicle (ROV), aptly named Daksh, can handle any suspected object in any terrain and in all kinds of weather. After having been hit 242 times by Improvised Explosive Devices (IED) in 2008, India will now have its first indigenously-developed IED-handling robot. Thanks to the scientists at Defence Research

Development Organisation (DRDO). This remote operated vehicle (ROV), aptly named Daksh, can handle any suspected object in any terrain and in all kinds of weather. It can move on rugged platforms, on stairs, outdoor terrain in country side and can cross a 300-metre wide ditch with ease. "Impressed with the vehicle, the army has recently ordered for 20 of them and asked for 70 more," sources in DRDO told Deccan Herald. Daksh, which weighs 400 kg, can handle a car bomb and even a medium-sized truck bomb by pulling it to a safe place.

Source: *Deccan Herald*

### Space is IITians new catchword

The success of Chandrayaan-I has resulted in an increasing number of IITians being attracted to space studies. Gyandeep Singh Momi, an aerospace student at IIT-Kharagpur, said, "Space has become the catchword here after Chandrayaan and most aerospace students want to be involved with space technology." Gyandeep says that Chandrayaan also had a strong impact at their student festival earlier this year. "Nearly 50% of the emphasis was on rocketry. And we had a Nasa astronaut talking to us." After India tested its nuclear weapons at Pokhran in May 1998, the number of applications received by BARC's training school in Trombay increased manifold. Today, job openings at ISRO carry more lucrative packages because a slew of projects is in the pipeline. The space buzz has infected IIT-Kanpur as well.

Source: *Times of India*

### International engines for LCA

All doubts raised over LCA being a key fighter aircraft for India owing to delay in the Kaveri engine can be put to rest. The LCA will fly — and fly on international engines initially. Mr M Natarajan, scientific adviser to defence minister A K Antony, has publicly spelt out DRDO's determination to fly the LCA in time for the IAF, even if on international engines in the first few squadrons. At a Aero India press conference, ADA director Mr P S Subramanyam, sitting next to Natarajan, said: "I am confident that DRDO will keep to the December 2010 initial operational clearance (IOC) plan. We have started weapons testing on the LCA, and soon the aircraft will fly with the hi-tech MMR radar." "We can do a few things with the Kaveri engine and fly the LCA no doubt. But that's not the point. There are new specifications and it will take time to meet those. "Meanwhile, we understand the IAF has tight induction bands and we will get the LCA into those bands. The first two squadrons will fly on GE engines and the next four will fly on any international engine that qualifies our new request for proposals.

Source: *Times of India*

### Isro already drawing up plans for Chandrayaan-3

A hundred days and counting. As India's prestigious Rs 386-crore unmanned mission to the Moon, 'Chandrayaan-1,' launched on October 22 scored a flawless century, its project director, Mylaswami Annadurai announced that a lunar sample return mission by India was on the cards. In a sample return mission, a spacecraft will land on the moon and bring back lunar samples to Earth for analysis. While some space officials maintained that 'Chandrayaan-1' recorded 100 days, Isro chief spokesperson S Satish said it completed the century. Speaking to TOI, Annadurai said the proposed sample return mission designated as 'Chandrayaan-3,' is expected to be launched around 2012. The mission will help gain deeper insights about Moon's characteristics.

Source: *Times of India*

### Saras aircraft gets help

The indigenous Saras civil aircraft has been drawing a lot of flak for being too heavy. However, an R&D firm ProSim and NAL have been able to reduce the aircraft's

weight by tweaking certain areas at the design stage. ProSim MD S Shamasundar said the work is pending certification by CEMILAC, DRDO's certification wing. This apart, ProSim has managed to crack the design code of the earlier MiG series fighter jets that India bought from Russia. The firm has also developed a life assessment methodology for thermal barrier coatings, which are used to prevent thermal shock. The methodology has made it possible to predict how many hours of flying time an aircraft has left. On turbo engines, a simulation model is being developed.

Source: *Times of India*

### 'Defence satellite will be up by next year'

The first dedicated defence satellite will be up by the middle of 2010, the Chief of Air Staff, Air Marshal Fali H. Major, has said. The Air Force is expanding the fleet of unmanned aerial vehicles or UAVs - small pilotless surveillance aircraft - over the Indian Ocean, the Air Chief said at a media briefing at Aero India 2009 here. The possibility of an Indian military satellite has been talked about in view of the vulnerable security situation over the sub-continent. Business Line learns that it will have communication, navigation and surveillance capabilities. It would be built and launched by the national space agency ISRO. Currently, some of the needs are met on dedicated transponders and frequencies on ISRO's civil communication satellites. "We already have UAVs. In today's security environment, the use of UAVs will only increase. The payloads are improving and giving better results. We are in the process of expanding our UAV fleet in the Ocean," he said.

Source: *Business Line*

### HAL to roll out light helicopters

Next in line to fly out of Hindustan Aeronautics Limited (HAL) hangars will be a light utility helicopter (LUH) that has been cleared by the government a couple of days ago. HAL chairman Ashok K Baweja told, the LUH was under development for the last ten months and was expected to make its first flight in mid-August, hopefully to coincide with Independence Day. In the aviation major's first major export order, the five advanced light helicopter Dhruvs will be handed over to the Ecuadorian air force chief on Friday. Another two will be handed over in a few months, with provision to send two more. Along with the ALH, HAL is setting up a base in Quito, Ecuador, to support the sale and

also to address other export markets in the South American region. HAL also had plans in the unmanned aerial vehicle area with Aeronautical Development Establishment, said Baweja, adding one such vehicle was under development for export.

Source: *Times of India*

### LCA naval version to fly this year

The first prototype of the naval version of the Light Combat Aircraft (LCA) is expected to fly towards the end of 2009. Within a few months of the first flight, a second prototype of the naval LCA will also take to the skies, Mr P S Subramanyam, director of the Aeronautical Development Agency (ADA), Bangalore, which is developing the fighter, told Deccan Herald here. The first version of the naval LCA will be a twin-seater trainer version, whereas the second naval LCA will be a fighter. Both are mark-I versions with limited capabilities and additional weight. A mark-II variation of the naval LCA is also under development and scheduled to be realised by 2014-15, Subramanyam said. The naval LCA, meant for future aircraft carriers, will have arrester-hooks using which a fighter plan can land on the dock, and immediately come to a complete halt. The existing Indian aircraft carrier INS Virat does not use this technology. Instead it uses traditional ramps for take-off and landing.

Source: *Deccan Herald*

### DRDO to test Agni-V by Dec 2010

India will test its most ambitious strategic missile next year, in what will be its first step towards having potent ICBM (intercontinental ballistic missile) capabilities, largely the preserve of the Big-5 countries till now. With the design work on the 5,000-km-range Agni-V virtually over now, DRDO chief Mr M Natarajan said the missile would certainly be tested before December 2010. "I am very confident we will be able to do it," he said, speaking on the sidelines of the Aero India-2009 show here. The work on the nuclear-capable Agni-V basically revolves around incorporating a third composite stage in the two-stage Agni-III, along with some advanced technologies like ring laser gyroscope and accelerator for navigation and guidance.

Source: *Economic Times*

### CNN-IBN award for Madhavan Nair

Chairman of Indian Space Research Organisation Mr G. Madhavan Nair and Team Chandrayaan were declared the CNN-IBN Indian of the Year 2008. Mr. Nair and his team also bagged an award in the Public Service category. "CNN-IBN Indian of the Year Awards initiative is an attempt to recognise the contribution of individuals who have stood first amongst equals," said Mr Rajdeep Sardesai, Editor-in-Chief, IBN network.

Source: *Hindu*

## Aviation majors eye Rs 42,000-cr project

From joyrides to celebrities to high-voltage marketing campaigns, global aviation giants have pressed the full throttle in the bruising battle to grab India's gigantic Rs 42,000-crore project for acquiring 126 multirole combat aircraft for IAF. With IAF planning to begin field trials for the six fighter jets in contention for this "mother of all defence deals" in April-May after evaluation of their technical bids, it's all about grabbing eyeballs of the decisionmakers as well as the public at large at the 'Aero India-2009' show. The six contenders — the American F/A-18 'Super Hornet' (Boeing) and F-16IN 'Super Viper' (Lockheed Martin), French Rafale (Dassault), Eurofighter Typhoon, Swedish Gripen (Saab) and Russian MiG-35 (RAC MiG) — are leaving nothing to chance.

Source: *Times of India*

## Foreign firms find fault with Indian offset policy

Notwithstanding the optimism exhibited by the defence ministry, global arms majors have complaints about the Indian offset policy. With too many risks involved, the Indian policy invariably lead to cost-escalation in military purchases, they claimed. As per the government policy, there is 30 percent offset — reinvestment in the Indian defence industry by winner of the military contracts worth more than Rs 300 crore — on all defence purchases. It can be executed directly or indirectly. "It is difficult to convince our corporate masters on the Indian offset policy. Many original equipment manufacturers backed out of Indian deals citing offset as one of the reasons," Mr Philip Georgariou, vice president (strategic partnership), Lockheed Martin said. Representatives of EADS, Boeing, Northrop Grumman and Rosoboronexport, Russia also pointed out critical problems in the Indian policy.

Source: *Deccan Herald*

## India readies \$3.1 bn for surveillance buys

India's defence authorities plan to procure new surveillance systems and at least 4 new radar-equipped helicopters worth almost \$3.1 billion in a bid to modernise the armed forces with more sophisticated weapon systems. "The evaluations are yet to start, but vendors from Germany, Czech, Israel and US have already started exploring contracts worth \$3.1 billion," a person familiar with the proposals told ET on conditions of anonymity. He added that the armed forces plan to procure 3 airborne radar, atleast 4battle-equipped helicopters and around 10-12 new surveillance systems. In December 2003, India had signed a \$1.1-billion contract with Israel for procurement of three Phalcon early warning radar systems. The new surveillance

systems being discussed do not include the Phalcon contract.

Source: *Economic Times*

## HAL may tie up with French firm to bid for Airbus orders

Hindustan Aeronautics(HAL) is looking at teaming up with French aircraft component supplier Latecoere to bid for manufacturing contracts from Airbus. HAL currently supplies two sets of front doors for the Airbus aircraft. With this tie-up, HAL hopes to supply all types of doors (including rear and emergency) across the Airbus family. HAL bagged a \$150-million contract last year for the supply of 2,000 ship sets (a pair) of Airbus aircraft doors. This contract was a follow-on order to an earlier 1,250-set contract. The public sector would also take on production of the 14-seater Saras passenger aircraft from its Kanpur facility. The Indian Air Force will acquire 15 of these aircraft in the first phase, HAL chairman Mr Ashok Baweja told ET.

Source: *Economic Times*

## TCS to up aerospace presence

Tata Consultancy Services is in the race for half a dozen complex work packages - in the range of \$10-20 million and multi-year contracts - from global aerospace and defence giants. Some of these packages have a manufacturing component bundled into the contract. While TCS will be engaged in the IT engineering services part of the work other Tata Group companies will vie for the manufacturing part. The deal value of the comprehensive packages could be much more. The Tata Group has deepened its presence in aerospace by incorporating two subsidiaries catering to purely aerospace and defence contracts. Tata Advanced Systems is a systems integrator while Tata Industrial Services will look at offset opportunities.

Source: *Economic Times*

## India hikes defence budget by 24 percent

India announced a hefty 24 percent hike in its defence budget for the upcoming fiscal year as its military fast-tracks acquisitions following the Mumbai militant attacks. "We are going through tough times. The Mumbai terror attacks have given an entirely new dimension to cross-border terrorism," acting finance minister Pranab Mukherjee said as he presented an interim budget to parliament. India blamed the November attacks, which killed 165 people in India's financial capital, on a Muslim militant group based in Pakistan. The 1.47-trillion rupee (29.4-billion dollar) defence allocation comprised 15 percent of the entire budget for the financial year beginning April 1, and Mukherjee said the amount could be increased if necessary.

Source: *Khaleej Times*

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