

# समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

A daily Current Awareness Service

Vol. 43 No. 252 28 November 2018



रक्षा विज्ञान पुस्तकालय

Defence Science Library

रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र

Defence Scientific Information & Documentation Centre

मैटकॉफ हाऊस, दिल्ली - 110 054

Metcalfe House, Delhi - 110 054

## **DRDO should be more innovative: Def Min**

Prompting Defence Research and Development Organisation (DRDO) to focus on research and development (R&D), Defence Minister Nirmala Sitharaman on Tuesday asked the organisation to "introspect" and be "more nimble" towards innovation. The DRDO has to play an active role in R&D, the Minister said at the launch of Mission Raksha Gyan Shakti, a Defence Ministry programme focussed on enhancing Intellectual Property Rights (IPR) culture. "The DRDO should, in a way, introspect to make themselves more nimble towards innovation," the Defence Minister said at the event attended by top officials of the DRDO, the Defence Ministry and the three services. Admitting that R&D is a "difficult area," she said it requires attention and has a long gestation period, Sitharaman said. She asked the DRDO to "refocus" its attention on R&D and "be on its toes" to exploit the opportunity and support extended by the Government.

The Minister said it is necessary to invest in R&D in a big way and the Government is willing to do that. She said it is "critical to identify, motivate and support" people who are capable of innovating, fabricating and manufacturing in-house. Sitharaman also asked her Ministry to break traditional barriers to innovations in defence sector by bringing in transparency and bridging existing gaps. Sitharaman also stressed that all stake holders should step up as more is needed to nurture innovation in the defence sector and translate it into commercially viable solutions. DRDO chairperson G Sateesh Reddy said there has been a steep rise in the filing of IPRs by the organisation. The Minister lauded the efforts of Department of Defence Production and Directorate General Quality Assurance (DGQA) for focused efforts in spreading awareness about IPR, thus promoting a culture of innovation and creation of Intellectual Property.

Delivering the keynote address, Secretary Defence Production Ajay Kumar highlighted the need to migrate from the culture of seeking Transfer of Technology (ToT) from foreign sources to generating Intellectual Property in India, to achieve the goal of self-reliance in defence sector. The IPR has emerged as a key ingredient of an ecosystem which stimulates innovation and ingenuity. An IP Facilitation Cell was established in April this year which has worked tirelessly to achieve ambitious targets of training 10,000 personnel of OFB and DPSUs on IPR and to facilitate filing of at least 1,000 new IPR applications. As part of the ongoing initiatives to enhance self-reliance in defence, the Department of Defence Production has instituted a new framework titled 'Mission Raksha Gyan Shakti' which aims to provide a boost to the IPR culture in indigenous defence industry.

## **ISRO's imaging satellite HysIS is all set for Thursday launch**

HysIS, the country's first hyperspectral imaging satellite for advanced earth observation, is slated for launch on Thursday from Sriharikota. About 30 small satellites of foreign customers will be ferried on the PSLV launcher, numbered C-43, the Indian Space Research Organisation has announced. They will go into an orbit different from that of HysIS. The launch from the first launch pad is set for 9.57 a.m.

### **Clearer images**

A hyperspectral imaging camera in space can provide well-defined images that can help identify objects on earth far more clearly than regular optical or remote sensing cameras, ISRO Chairman K. Sivan said earlier.

The technology will be an added advantage in watching over India from space across sectors including defence, agriculture, land use and mineral exploration. Sources said the new 'eye in the sky' can be used to even mark out a suspect object or person on the ground and separate it from the background with applications

in transborder infiltration etc. “The primary goal of HysIS is to study the Earth’s surface in visible, near-infrared and shortwave infrared regions of the electromagnetic spectrum,” ISRO said. HysIS will be ISRO’s first full-scale working satellite with this capability. While the technology has been around, not many space agencies have working satellites with hyperspectral imaging cameras as yet.

### **Third longest mission**

The November 29 PSLV flight would last eight minutes short of two hours, making it the third longest, low-earth mission of ISRO. The satellites would be ejected in two orbits by restarting the rocket’s fourth-stage engine twice. The PSLV, flying in its core-alone format, will first release HysIS to an orbit at 636 km 17 minutes after launch. The engine of the rocket’s fourth stage will be restarted twice — once an hour from launch and again 47 minutes later.



*Wed, 28 Nov 2018*

## **NASA’s Insight touches down after supersonic Plunge**

NASA’s robotic InSight lander -- designed to dig deep into the rocky surface of Mars to reveal its secrets -- has successfully touched down on the Red Planet after a supersonic plunge through its rose-hued atmosphere, the US space agency said Tuesday. NASA’s robotic InSight lander designed to dig deep into the rocky surface of Mars to reveal its secrets — has successfully touched down on the Red Planet after a supersonic plunge through its rose-hued atmosphere, the US space agency said Tuesday.

The lander sent signals indicating that its solar panels are open and collecting sunlight on the Martian surface, InSight mission team said in a statement. “Aaah...soaking up the Sun with my solar panels. After a long flight, and thrilling #MarsLanding, it feels great to get a good stretch and recharge my batteries,” the InSight Twitter handle posted. NASA’s Mars Odyssey orbiter relayed the signals of the landing, which were received on Earth at about 5:30 pm PST (7 am IST, Tuesday). Solar array deployment ensures the spacecraft can recharge its batteries each day. Odyssey also relayed a pair of images showing InSight’s landing site.

The Insight lander touched down near Mars’ equator on the western side of a flat, smooth expanse of lava called Elysium Planitia, with a signal affirming a completed landing sequence at approximately 3 pm EST (1:30 am IST, Tuesday). The probe was launched from the Vandenberg Air Force Base in California, US on May 5. “Today, we successfully landed on Mars for the eighth time in human history,” said NASA Administrator Jim Bridenstine. “InSight will study the interior of Mars, and will teach us valuable science as we prepare to send astronauts to the Moon and later to Mars,” said Bridenstine. The landing signal was relayed to NASA’s Jet Propulsion Laboratory (JPL) in California, via one of NASA’s two small experimental Mars Cube One (MarCO) CubeSats, which launched on the same rocket as InSight and followed the lander to Mars.

They are the first CubeSats sent into deep space. After successfully carrying out a number of communications and in-flight navigation experiments, the twin MarCOs were set in position to receive transmissions during InSight’s entry, descent and landing. “We hit the Martian atmosphere at 19,800 kilometers per hour, and the whole sequence to touching down on the surface took only six-and-a-half minutes,” said InSight project manager Tom Hoffman at JPL. “During that short span of time, InSight had to autonomously perform dozens of operations and do them flawlessly — and by all indications that is exactly what our spacecraft did,” said Hoffman. Confirmation of a successful touchdown is not the end of the challenges of landing on the Red Planet, NASA said. InSight’s surface-operations phase began a minute after touchdown. One of its first tasks is to deploy its two decagonal solar arrays, which will provide power. That process begins 16 minutes after landing and takes another 16 minutes to complete.

Verification of whether the panels have been deployed will come from NASA’s Odyssey spacecraft, currently orbiting Mars. That signal is expected to reach InSight’s mission control at JPL about five-and-a-half

hours after landing. “We are solar powered, so getting the arrays out and operating is a big deal,” said Hoffman. “With the arrays providing the energy we need to start the cool science operations, we are well on our way to thoroughly investigate what’s inside of Mars for the very first time,” he said.

InSight will begin to collect science data within the first week after landing, though the teams will focus mainly on preparing to set InSight’s instruments on the Martian ground. At least two days after touchdown, the engineering team will begin to deploy InSight’s 1.8-metre-long robotic arm so that it can take images of the landscape. “Landing was thrilling, but I’m looking forward to the drilling,” said InSight principal investigator Bruce Banerdt of JPL. “Within two or three months, the arm will deploy the mission’s main science instruments, the Seismic Experiment for Interior Structure (SEIS) and Heat Flow and Physical Properties Package (HP3) instruments,” he said. InSight will operate on the surface for one Martian year, plus 40 Martian days, or sols, until November 24, 2020.

With InSight’s landing at Elysium Planitia, NASA has successfully soft-landed a vehicle on the Red Planet eight times. “The InSight team can rest a little easier tonight now that we know the spacecraft solar arrays are deployed and recharging the batteries,” said Hoffman. “It’s been a long day for the team. But tomorrow begins an exciting new chapter for InSight: surface operations and the beginning of the instrument deployment phase,” he said. In the coming days, the mission team will unstow InSight’s robotic arm and use the attached camera to snap photos of the ground so that engineers can decide where to place the spacecraft’s scientific instruments. It will take two to three months before those instruments are fully deployed and sending back data. In the meantime, InSight will use its weather sensors and magnetometer to take readings from its landing site at Elysium Planitia — its new home on Mars.

## पंजाब केसरी

Wed, 28 Nov 2018

# अनुसंधान एवं विकास के काम में तेजी लाये डीआरडीओ : सीतारमण

नई दिल्ली, (वार्ता): रक्षा मंत्री निर्मला सीतारमण ने देश को रक्षा उत्पादन के क्षेत्र में आत्मनिर्भर बनाने के लिए नवाचार पर विशेष ध्यान देने की जरूरत पर बल दिया है और रक्षा अनुसंधान एवं विकास संगठन से इस दिशा में तेजी से काम करने को कहा है। देश में बौद्धिक संपदा अधिकार संस्कृति को बढ़वा देने के लिए रक्षा उत्पादन विभाग के महत्वाकांक्षी कार्यक्रम मिशन रक्षा ज्ञान शक्ति को लाँच करते हुए श्रीमती सीतारमण ने सभी



संबंधित पक्षों से रक्षा क्षेत्र में नवाचार के काम को तेजी से आगे बढ़ने तथा उन्हें व्यायसायिक दृष्टि से अमली जामा पहनाने की दिशा में काम करने को कहा। डीआरडीओ को इस मिशन के तहत बड़ी भूमिका निभाने के लिए उत्साहित करते हुए उन्होंने कहा कि बदली परिस्थितियों से उत्पन्न अवसरों तथा सरकार से मिल रहे समर्थन का फायदा उठाते हुए संगठन, “अनुसंधान और विकास पर विशेष रूप से दोबारा ध्यान दे।”